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JOYCE DORIS CLARK

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THE IMPACT OF TEACHER SELF-DISCLOSURE ON
STUDENT PERCEPTIONS OF THE TEACHER

by

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B.S., Wagner College, 1971

M.A., University of New Hampshire, 1975

A THESIS

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ABSTRACT

THE IMPACT OF TEACHER SELF-DISCLOSURE ON STUDENT PERCEPTIONS OF THE TEACHER

by

JOYCE D. CLARK

The purpose of this study was to investigate the impact of teacher disclosure on student perceptions of the teacher. Ninety-six students enrolled in psychology courses were randomly assigned to six treatment groups in which they listened to a teacher present a lecture containing the experimental manipulations. Two types of teacher disclosure (self-disclosure and disclosure about some other person) were manipulated in a 2 x 3 design in which student perceptions and ratings of the teacher were measured. After listening to one of six lectures, students immediately rated the teacher on personality dimensions (e.g., warm and trustworthy) as well as professional qualities (e.g., organized and stimulating). A multivariate analysis of variance indicated the two independent variables produced highly significant effects on many of the dependent measures. A major finding was the consistency of the pattern of student ratings across the varying levels of intimacy of disclosure. While engaging in self-disclosure, the teacher was perceived most positively at a medium level of intimacy and least positively at a highly intimate level. In reference to teacher disclosure about some other person, ratings were most positive at the high level of intimacy and least positive when the disclosure was of medium intimacy. Results are discussed in reference to the implications for the use of teacher disclosure in the college classroom as well as in relation to previous findings on the impact of teacher personality.

INTRODUCTION

The search for stable correlates of successful teaching and the proper evaluation of faculty performance have been a focal point of educational research for decades. Increasing pressure for clarification of the dimensions of effective teaching and its evaluation comes from several directions, ranging from students wanting a higher level of stimulating instruction to faculty and administrators utilizing instructional performance in facing difficult academic staffing decisions. Given that teaching effectiveness is a principal criterion in the process of faculty evaluation, insight into the factors affecting this important criterion are needed for many good reasons. Thus, the present study of teacher/student interaction addresses itself to the practical as well as the theoretical issues involved in the educational process.

When students rate a teacher, are they influenced by characteristics of the teacher, characteristics of the course, or both? A review of the research on student ratings of college teachers (Kulik and Kulik, 1974) revealed that numerous studies agree about the evaluation of faculty performance, with a factor of teaching skill prominent in most rating forms. In addition to the skill factor, research on personality traits of college instructors (e.g., Sherman and Blackburn, 1975) has shown that the personal qualities an instructor as an individual brings to the educational setting are related to effective teaching. Although an instructor's skill in organizing his/her course is a necessary part of successful teaching, this in and of itself is not sufficient for

achieving maximum effectiveness in the college classroom. Such research suggests it is necessary to investigate systematically the personal dimensions of the college instructor.

The present study is an experimental investigation of one personal dimension of a college teacher: verbal self-disclosure. There is some evidence that self-disclosure is related to ratings of college teaching. Morgenstern (1969) found that global subjective ratings of college teacher success as judged by colleagues and students were significantly related to verbal self-disclosure. Kuiper (1975) reported that the majority of students in his sample saw the most effective teachers as engaging in self-disclosure. However, the evidence for the relationship between self-disclosure and teaching effectiveness is sketchy and thus far correlational in nature.

As this was clearly an exploratory study, the variables were employed largely on an intuitive basis. The independent variables involved two types of disclosure (teacher self-disclosure and teacher disclosure about some other person) and three levels of degree of intimacy of the disclosure (low, medium, high). The purpose of the study was to identify global dimensions of teacher disclosure that would affect students' perception of the teacher's skill, empathy, organizing ability, and other significant dimensions of instructor performance. The experimental manipulation in which the teacher discloses about some other person was included to explore the possibility that any effects of disclosure might be due to its function as clarification of content, rather than to its revealingness about the teacher. It was necessary to include three levels of intimacy of disclosure as much research (e.g., Cozby, 1973) has indicated the curvilinear nature of the effects of self-disclosure.

Teacher Rating Forms

Research on the dimensions of teaching effectiveness has proliferated for a variety of reasons. The rise of student "consumerism" and the demands for active student input have led to mandatory use of teacher evaluation forms at many institutions. Obviously, improvement of teacher training programs requires that we know which teacher behaviors make a difference in the achievement of students. The pressures exerted by the tightening of the academic job market force faculty and administrators to utilize objective criteria in their selection process. As pressing as these demands may be, it is crucial that we understand and scrutinize the method by which these demands are typically met, i.e., the use of teacher rating forms. Considering the importance placed on the results of the evaluation of instruction, it is necessary that we explore both the reliability and the validity of the instruments used before examining the dimensions of effective teaching.

Reliability and validity of teacher rating forms. It is intuitively obvious that the usefulness of teacher rating forms is severely limited unless they are related in a meaningful way to the ultimate criterion of good teaching, i.e., student learning. Although there are concomitant goals of successful teaching (e.g., increasing student interest, fostering growth in student self-esteem, etc.), student achievement is undoubtedly the "bottom line" of the educational process. Research on student ratings of college teachers has indicated that students can rate classroom instruction with a reasonable degree of reliability in reference to both internal consistency and stability over time (Costin, Greenough, and Menges, 1971; Kulik and McKeachie, 1975). The question that has not been easily answered, however, is how valid are the rating forms when predicting student achievement.

Critical reviews of research on the evaluation of college teaching (e.g., Kulik and McKeachie, 1975) reveal contradictions in the findings of studies dealing with the relationship between achievement and student ratings. Costin (1978) states that the results of the investigations which used course grades as the criterion of achievement are almost equally divided between those which obtained positive correlations between grades and student ratings and those which showed little if any correlation.

A study by Rodin and Rodin (1972) reported a high negative correlation between teacher ratings and student achievement. They found a $-.75$ correlation between the average rating on "What grade would you assign to your instructor's total teaching performance?" and the average course grade of students. They concluded that students rated most highly the instructors from whom they learned the least, a conclusion that has startling implications. However, the methodology of this investigation has been severely criticized for a variety of reasons (Frey, 1973; Gessner, 1973; Kulik and McKeachie, 1975). The criticisms focus on the unusual nature of their measure of achievement and the relatively minor role of the teachers who were evaluated.

McKeachie, Lin and Mann (1971) did a series of studies which provided evidence for the validity of teacher rating forms in reference to student achievement, though the evidence was not as convincing as the authors had hoped. They analyzed five sets of data separately for females and males, for six different factors measured by the rating scales, and for several different criteria of student achievement. In four of the five studies teachers rated high on the "skill" factor tended to be effective with female students, though the results did not hold up with the males. In all five studies teachers rated high in

"structure" tended to be more effective with women than with men. Cohen and Berger (1970) also found that specific dimensions underlying student ratings were predictive of achievement on a comprehensive exam. However, it was the "student-centered" factors (student interest and interaction with the instructor) which manifested this relationship rather than those aspects which emphasized course structure.

A study by Frey (1973) was a replication of the Rodins' study with methodological modifications to improve the technical soundness of the investigation. Because the Rodins' study was based on evaluation of graduate teaching assistants who met with students for only 40% of the class time to answer questions and administer test problems, Frey suggested that the Rodins were really only assessing the TA's ability in complementing the teaching style of the major lecturer and not the students' ability to identify good teachers. To correct for this possibility, Frey correlated the average final exam performance for students enrolled with one of eight instructors of introductory calculus or with one of five different teachers of multidimensional calculus with the average student instructional ratings for each instructor. Frey found six factors in the rating form, and each factor was positively correlated with student performance. The overall correlations between teacher evaluations and student performance were .91 and .60 for the two courses. In addition, Frey found that student accomplishment (e.g., developed ability to examine evidence in this field) and teacher presentation (e.g., communicated in a clear manner) were the two factors most highly correlated with student achievement.

A more recent investigation (Frey, Leonard, and Beatty, 1975) supported the results of the above study. These investigators found

that three rating factors (labeled student accomplishment, presentation clarity, and organization-planning) correlated highly with a measure of student achievement (.59, .58, and .51, respectively). Ellis and Richard (1977) found that classes of introductory psychology which perform better rate their teachers higher, reporting ratings/achievement correlations ranging from .47 to .62.

Gessner's study (1973) of student achievement and student ratings was also presented in answer to the Rodin and Rodin research. He found correlations of .77 and .69 between student evaluations of teachers and student performance on a nationally normed examination. However, Kulik and McKeachie (1975) state that Gessner's methodology was inadequate, claiming that there are other uncontrolled factors separate from the teacher's ability (e.g., textbooks) that could have produced such a correlation.

A review of the research by Kulik and Kulik (1974) suggests several factors which may account for the inconsistency in results when correlating student ratings and achievement measures. First, they suggest that the different investigators have calculated the correlation coefficients in different ways; hence, it is not unexpected that they report different results. Second, they suggest that the factor of teacher experience may contribute to the variety of reported results. Sullivan and Skanes (1974) reported a modest but significant relationship between student evaluation of instruction and student achievement. In further scrutinizing the relationship, however, they found that ratings and achievement were highly related for a group of experienced teachers ($r=.685$, $p<.01$) but not related for the inexperienced instructors ($r=.132$, $p=n.s.$). The authors suggest that experienced teachers--who

presumably have developed a more consistent teaching style--compose a population on which it is easier to obtain valid ratings. This factor of experience may also resolve the discrepancy between Rodin and Rodin (1972), who found a negative correlation for part-time teaching assistants, and Gessner (1973) and Frey (1973), who reported a positive correlation for full-time experienced instructors.

Leventhal, Perry, and Abrami (1977) agree that Sullivan and Skanes have pinpointed a teacher characteristic that influences the ratings/achievement correlation, but added another dimension: student knowledge of a teacher's experience. This dimension alters the perspective of the experience factor, making it a student, rather than a teacher, characteristic. Using a methodologically sound experimental design to test this hypothesis, Leventhal et al., varied lecture quality (good vs. poor) and instructions about the teacher's experience (experienced vs. inexperienced) to see the effect on both student performance and teacher ratings. The results are complex, but briefly they found that the good lecturer facilitated achievement for students believing their teacher to be inexperienced, but had no effect on achievement for students who were led to believe that their teacher was experienced. In other words, student ratings predicted achievement only in the inexperienced teacher condition. These results are in contradiction to those reported by Sullivan and Skanes, who found the positive ratings/achievement correlation for the experienced teachers. Leventhal et al., concluded that, although students' beliefs (a student characteristic) affects the correlation, their study provided stronger evidence that teacher characteristics (e.g., style consistency) have a significant impact on the ratings/achievement correlation.

A recent study by Costin (1978) reported moderate but consistent positive correlations between student achievement and ratings of instruction, hence supporting the validity of teacher ratings as predictors of performance. In attempting to account for the failure to find consistent positive ratings/achievement correlations, Costin focused on an often overlooked confounding factor: the fact that measures of achievement are usually developed by the same persons the students are evaluating. Gessner (1973) attempted to overcome this limitation by using an external criterion of achievement, but, as mentioned, Gessner has been criticized on other methodological grounds (Kulik and McKeachie, 1975). Consequently, Costin utilized an externally developed criterion of achievement by controlling other factors (e.g., textbooks) and also repeated the investigation over a period of four years. The measure of student achievement was two comprehensive multiple-choice exams prepared by the supervisor (but not instructor) of all sections of the course. Correlations between ratings of teacher skill and mean class performance on the exams ranged from .41 to .52. These results support the validity of teacher ratings for predicting achievement in students of inexperienced teachers (his instructor sample). These results are consistent with the results reported by Leventhal, Perry, and Abrami (1977) on the experienced/inexperienced dimension, as well as the Rayder (1968) study, which also reported that teachers with less experience were rated more enthusiastic, stimulating, understanding, and systematic. Although Costin's results are in opposition to those of Sullivan and Skanes, direct comparisons cannot be made; whether Costin's study could produce similar results with experienced teachers is an empirical question.

In summary, a review of studies indicated that student ratings can provide both reliable and valid information on the quality of instruction, though student ratings fall short of an ideal measuring device. It seems reasonable then that teacher rating forms can indeed provide a useful, yet limited, method of evaluating the impact of a teacher's performance.

Student variables and course characteristics. The influence of student variables and course characteristics on student ratings of instructor performance has been investigated. Rayder (1968) indicated that student ratings of instruction were indeed more related to teacher characteristics than those of the students performing the ratings. He found that student ratings were not related to student age, sex, grade level, major area, or previous grade received from the instructors they were rating. In fact, he found that less than 2% of the variability in teacher ratings was predictable from student characteristics!

Granzin and Painter (1973) also investigated the relationship between characteristics of students and course ratings. They found an absence of a relationship with student grade level, age, sex, final course grade, and GPA. Student characteristics that were highly related to ratings included student commitment variables (e.g., the effort put into this course and the importance of the course). However, it is not feasible to consider these commitment variables as independent student characteristics, as a teacher can have a great impact on the commitment his/her students feel toward the course.

A recent study by Wilson and Doyle (1976) also addressed the question as to whether there are any factors that might moderate the

data from student ratings of instruction. They were particularly interested in the possible interactive effects of student and instructor sex, as previous research has reported inconsistent findings. Wilson and Doyle's study used a multivariate approach (one of the few to do so) to investigate male and female student ratings of male and female instructors. In results tabulated on six teachers of each sex rated by their 316 students, the authors concluded that sex interactions in student ratings of instruction do not typically occur. These results are consistent with those reported by Elmore and LaPointe (1974) who also found no sex interactions. Wilson and Doyle allow for the possibility that situation-specific sex interactions may occasionally occur, for example, in a course on sex roles taught from either an extreme feminist or anti-feminist perspective. Although it seems reasonably clear that student-instructor sex interactions are typically absent from student ratings, the authors suggest that further study or moderator variables such as teaching methods and instructor and student personality variables would enhance the literature.

In reference to course characteristics, there is some consistency in the results. Although there are some exceptions (e.g., Solomon, 1966) most investigators have found that teachers of small classes receive higher ratings than teachers of larger classes (Elmore and Pohlman, 1978; Kulik and Kulik, 1974). Elective courses generally receive higher ratings than required courses, as do upper level and graduate courses when compared to lower level courses (Kulik and Kulik, 1974). Strong departmental differences in ratings were found by Rayder (1968), though the specific differences were not made clear. It is also likely that there are differences in attractiveness of courses within a single department (such as abnormal psychology compared to psychometrics),

though this remains an empirical question. For the most part, the effect of course content on student ratings has not been studied.

Teacher Characteristics

Although it has been demonstrated that course characteristics such as class size influence ratings of teaching skill, teacher characteristics are more influential than those of the course in determining skill ratings (Hogan, 1973). It is clear that teacher characteristics are important influences on student ratings, but in most instances the relations are not simple.

Dimensions of instruction. What sorts of discriminations do students make in rating the quality of their instruction? Kulik and McKeachie (1975) indicate that factor analysis is the usual method employed to answer this question. The earliest factor analytic studies (e.g., Bendig, 1954; Creager, 1950) found two factors of effective teaching when using the ten-item Purdue Rating Scale. These factors, although given different labels, consistently refer to a personal component (empathy, rapport) and a skill component (competence, professional maturity). Over the years, these two factors have proved surprisingly robust. More recent factor analyses of student ratings, using more sophisticated methods and larger item pools, also report instructor empathy and competence as two major dimensions (Kulik and Kulik, 1974).

Isaacson, McKeachie, Milholland, Lin, Hofeller, Baerwaldt, and Zinn (1964), employed factor analysis to find dimensions of instructor effectiveness using a pool of 145 rating items. The investigators were able to reduce this item pool to a set of 46 representative statements about teachers. These items, when factor analyzed for

four separate samples of students, revealed six factors which were consistent in different semesters and with different students and teachers. These factors were labeled Skill, Rapport, Structure, Overload, Feedback, and Interaction.

Solomon, Rosenberg, and Bezdek (1964) extracted ten factors from a pool of 169 items descriptive of the teacher's behavior, motives and objectives, eight of which accounted for 66% of the variance. The three largest factors (Energy vs. Lethargy, Control vs. Permissiveness, Lecturing vs. Student Participation) appear to correspond to the Isaacson factors of Skill, Structure and Rapport (Kulik and McKeachie, 1975). The investigators also reported that the highest gains in student comprehension were related to teacher energy and flamboyance as well as to a moderate position on the permissiveness vs. control factor. The authors speculated that these factors may function as activators of student interest and personal involvement.

A review of the research by Kulik and Kulik (1974) indicates that there is considerable agreement among factor analytic studies on the dimensions of student rating forms. Their examination of the studies showed that there is good evidence for four basic dimensions: Skill, Rapport, Structure, and Difficulty. The authors further state that "the skill dimension is without question the overriding quality to which student judges react when making an evaluation." (p. 52). This skill dimension basically describes a teaching pattern in which material is presented in a clear, interesting manner which stimulates the interest of the student. (In spite of varying labels, the Kuliks also considered the energy factor of Solomon et al. (1966) and the

enthusiasm factor of Hildebrand, Wilson and Dienst (1971) to be tapping this Skill factor). The rapport factor refers to interacting with students in a manner which communicates empathy and concern. A teacher who is rated high in structure is perceived as prepared and organized. High ratings on difficulty indicates that a teacher is seen by his or her students as requiring a large amount of work.

A more recent factor analytic study by Haslett (1976) utilized 41 semantic differential scales measuring the concept of a good teacher; her purpose was to assess the general underlying judgmental dimensions which students use in evaluating teacher effectiveness. She reported five factors which are similar to those found in previous studies. Instead of the Skill factor being the prevailing factor, she found that the Rapport factor accounted for the largest percentage of the variance. The Rapport factor was measured by scales such as fairness, trustworthiness, and concern for students. The Skill factor--labeled Instructional Style--was the second most dominant factor. The scales loading high on this factor included knowledgeable, organized, experienced, interesting, and energetic. Communication Style (the third factor) was related to informality, congeniality, and a willingness to admit mistakes. This factor seems to be more related to personal dimensions of the teacher as an individual rather than to teaching skill per se. The fourth factor was Stimulation, which measured a teacher's ability to be demanding and challenging. (Note the similarity to Difficulty factors in previous studies.) Haslett uncovered a new factor labeled Personalization, which reflected a personalized, human quality added to one's teaching. In short, Haslett replicated the four major dimensions previously reported and added another one.

Using a different approach to probe the same issues, Pohlmann (1973) was interested in identifying the specific attributes involved in performing global ratings of instruction. His concern was that general ratings did not provide specific feedback for teachers who wished to improve their performance. He correlated "high-inference" ratings (i.e., global) with a set of specific items. He found that students described effective teachers as achieving course objectives, being prepared and organized, and increasing appreciation for the subject. Less important dimensions were promptness in returning tests, setting clear grading standards, and being available outside of class.

The consistency of the factors reported above provides sound evidence for a core of basic dimensions of effective teachers from a student perspective. However, do teachers share the same perspective? Shikiar (1976) provided support for congruency between student and teacher perceptions of effective instruction. The results of his multidimensional scaling procedure indicate both sides of the classroom share a common perception of teacher characteristics.

In summary, it appears that numerous studies agree about the major dimensions in the evaluation of faculty performance. Skill and Rapport are the most frequently cited characteristics as having significant impact. However, a major problem in the evaluation process--the lack of agreement on appropriate criteria--is not fully resolved (Hildebrand and Wilson, 1970). Sherman and Blackburn (1975) contend that the lack of adequate research on teacher personality characteristics contributes greatly to this problem by overlooking a potentially important influence on student perception of teacher effectiveness.

Teacher personality. A review of over 150 articles on the personality characteristics of teachers (Getzels and Jackson, 1963) stated that very few dealt with college faculty. Although it seems reasonable that personality traits might be related to college teaching ability, attempts to demonstrate such a relationship have met with limited success. One of the earliest studies (Bendig, 1955) correlated ten personality trait scores (derived from the Guilford-Zimmerman Temperament Survey) with student ratings. No significant relationships were detected.

Maslow and Zimmerman (1956) appeared to meet with more success. They found the correlation between student ratings of "good teaching" and "good personality" was .76. Unfortunately, "personality" and "ability" were so globally defined that it is difficult to interpret the results.

A study by Isaacson, McKeachie, and Milholland (1963) used several techniques (peer group nominations, adjective check lists, and Cattell's 16 PF) to assess the personality of 23 teaching fellows in psychology. Their correlation between personality and student ratings of instruction showed "general cultural attainment" to be most consistently correlated with high ratings. This variable reflects an artistically sensitive and effectively intelligent individual. "Surgency"--i.e., being talkative and enthusiastic--was significantly related to high ratings on Rapport.

Sorey (1968), concerned with the sparsity of research on this topic, attempted to differentiate between "superior" and "inferior" teachers in regard to their personality traits. Using the Guilford-Zimmerman Temperament Survey, he found no trait differences. However,

his study has been criticized on methodological grounds (Costin, Greenough, and Menges, 1971).

Pinpointing a potential reason for the lack of success in this area, Murray (1975) believed that earlier research suggested that peer ratings of personality, rather than self-report, were more likely to lead to meaningful correlations. Consequently, he used a peer rating technique where each member of a sample of 36 teachers was rated by a total of 8 to 13 peers, including a common group of peers who rated all instructors. Personality items were derived from Jackson's Personality Research Form. His results showed that college teaching ability as judged by students was closely related to instructor personality traits. Four traits (leadership, extroversion, objectivity, lack of anxiety) accounted for approximately two-thirds of the between-teacher variance in student ratings. It seems quite possible that his use of a peer rating technique accounts for his finding a positive relationship. In his study, both personality and teaching were judged by comparable methods, i.e., by external observers. Murray concluded that it appears that students respond best to a fair, friendly, and flexible instructor who possesses definite goals and initiative.

Sherman and Blackburn (1975) reported a correlation of .77 between personality and teaching effectiveness. Their factor analysis on the personality measurement produced four factors: (1) Personal potency (extroversion, energetic, good communicator), (2) Pragmatism, (3) Amicability (sensitive, open-minded, accepting), and (4) Intellectual Competency (knowledgeable, rational). An analysis on the relationships between these factors and teaching effectiveness criteria revealed very large and a statistically significant difference between the high and

low groups on the effectiveness measures. It appears then, that the authors have identified meaningful patterns of behavior that are directly related to students' perceptions of teaching competency.

Factor analysis was employed by Romine (1974) to ascertain the dimensions of an effective instructional climate from both student and faculty perspectives. Of seven clusters of attributes judged to be significant in an effective climate, Instructor Personality was the most important factor. The traits reflected in this cluster depict instructors as dynamic, personable people who are enthusiastic about their courses and possess a sincere interest in their students.

In spite of the despair researchers might experience in their quest to identify personality characteristics of successful teachers, there is some consistency. Warmth (Costin and Grush, 1973; Elmore and Pohlmann, 1978) and empathy (Aspy and Roebuck, 1975), are two dimensions which consistently appear to be related to effective teaching.

Elmore and LaPointe (1975) found that teachers who were perceived to be warmer and primarily interested in their students received higher student ratings. In examining the influence of sex interactions, no interactions between faculty sex, student sex, and teacher warmth were found.

Haslett (1976) has indicated the importance of a teacher's ability to add a personalized, human quality to his or her teaching. A link between faculty personal characteristics and student achievement has been shown. Aspy and Hadlock (1967) demonstrated that teachers functioning at the highest levels of facilitative conditions (e.g., empathy and positive regard) had students that attained higher levels of achievement than students of teachers functioning at the lowest level

of these conditions. Another study by Aspy (1972) suggested that a teacher's high positive regard for students elicited higher levels of cognitive functioning from the students. This is consistent with research (e.g., Romine, 1974) which shows that a teacher's genuine interest in and respect for students are crucial components of an effective instructional climate.

Rogers (1969) called attention to the evidence which indicates that empathy is an important dimension in teaching which facilitates a higher level of learning. Rogers defined teacher empathy as "the ability to understand the student's reaction from the inside" (p. 111) and be sensitive to the student's perspective. Aspy and Roebuck (1975) describe a series of investigations testing Rogers' humanistic theory of education. The authors believe support was found for Rogers' contention that empathy, congruence, and positive regard significantly related to classroom learning.

Chang and Berger (1974) did a field study to examine the relationship of teacher empathy to academic achievement. Students of teachers rated high on empathy (either subjectively or objectively rated) performed better on various learning measures when compared to low empathy teachers. The students who performed best were those who had objectively high empathy teachers and who also perceived their teachers to be high on this dimension. The authors conclude that teacher empathy is directly and highly related to student ratings of instruction as well as student achievement.

Although research has not yet adequately characterized the relationship between various personality characteristics and classroom teaching behavior, it seems clear that the personal qualities an individual

teacher brings to the classroom have an impact on his or her effectiveness. However, in order to implement the findings of research of this nature in areas such as the improvement of teacher training programs and of teacher performance, it will be necessary more fully to operationalize personality traits in terms of specific classroom behaviors. There is also a need for experimental investigation of these dimensions, as correlational studies dominate the literature.

Self-disclosure

In addition to the personality dimensions reviewed above, several sources (Rogers, 1969; Tolar, 1975) have stated that genuineness is another quality teachers should cultivate to improve the educational environment. As with empathy, warmth, and positive regard, there is a growing body of evidence supporting the therapeutic quality of this attribute. (It should be noted that the use of the term "therapeutic" does not imply that teachers should function as therapists for their students. Rather it refers to the facilitative nature of a teacher's role such as that found in any "helper-helpee" relationship.) In reference to qualities which facilitate learning, Rogers (1969) states:

Perhaps the most basic of these essential attitudes is realness or genuineness. When the facilitator (teacher) is a real person, being what he is, entering into a relationship with the learner without presenting a front or facade, he is much more likely to be effective. It means that he comes into a direct personal encounter with the learner, meeting him on a person-to-person basis. It means that he is being himself, not denying himself. (P. 106)

In short, being genuine basically involves the ability to be oneself--expressing thoughts, feelings, and experiences--rather than refusing to acknowledge these reactions as one's own.

The behavioral method by which we reveal ourselves (i.e., are genuine with others) is self-disclosure. Self-disclosure is defined

as "any information about himself which Person A communicates to Person B." (Cozby, 1973, p. 73).

Basic research on self-disclosure. Research on self-disclosure has proliferated since Sidney Jourard, a humanistic psychologist, first coined the term self-disclosure in an article published in 1958 (Jourard and Lasakow, 1958). Much of the research on this topic has been in reference to its function in psychotherapy, as the understanding of significant aspects of a client's experience is a necessary precondition in facilitating constructive change. A number of writers (e.g., Fromm, 1955; Jourard, 1971; Mowrer, 1961) have suggested that self-disclosure has important consequences for mental health. Jourard (1964, 1971) feels that self-disclosure is extremely positive and should be fostered in human relationships.

Various studies have sought to establish self-disclosure as a personality construct, although characteristics associated with self-disclosure are not well understood. It has been associated with birth order (Dimond and Munz, 1967) as well as social orientation toward others (Cozby, 1973). Other studies have suggested that situational factors (e.g., environmental pressures) can override personality factors (Chitlick and Himelstein, 1967).

An examination of sex differences of self-disclosure patterns reveals little consistency. Although some investigators have found that females exhibited higher levels of disclosure than males (Jourard, 1964), other studies (e.g., Brook, 1974) have reported no sex differences.

One aspect of self-disclosure that has received widespread support is its reciprocity effect: self-disclosure breeds self-disclosure (Chaiken and Derlega, 1974; Cozby, 1973). For example,

a significant relationship was found between the duration of the interviewer's disclosure and duration of subjects' subsequent disclosure (Jourard and Jaffee, 1970). Likewise, personal topics elicited more personal disclosure than impersonal ones (Wilson and Rappaport, 1974). Although the theoretical issues which underlie this dyadic effect have not been resolved, it is clear that this effect exists.

The major dimensions of self-disclosure that are usually studied are (1) depth, or level of intimacy of personal information and (2) breadth, or the range of topics disclosed. The majority of the research focuses on the depth dimension. For example, Cozby (1972) reported a curvilinear relationship between intimacy of disclosure received and perception of liking for the discloser; liking increased as disclosure input went from low to moderate input, but decreased as it went from moderate to high intimacy. As the effects of self-disclosure in different situations on different dimensions are vast, the interested reader is directed to thorough reviews (Chaiken and Derlega, 1974; Cozby, 1973; Goodstein and Reinecker, 1974).

Self-disclosure in the classroom. There is some evidence--albeit scarce--that self-disclosure is related to evaluation of effective teaching. Combs (1965) believes that teachers must be willing to disclose themselves and to permit others to see what a teacher thinks, believes and stands for.

Morgenstern (1969) investigated the relationship between level of teacher self-disclosure and global ratings of effectiveness. He had students and faculty peers rate teachers in their instructional effectiveness; these results were then correlated with teachers' own

ratings on a self-disclosure questionnaire. He found that verbal self-disclosure to students was significantly related to the global criterion of teacher effectiveness.

The educational models of Rogers (1969) and Carkhuff (1969) provided the basis for a study by Carich (1973) which focused on teacher self-disclosure. In assessing the impact of teacher disclosure on student perceptions of the teacher, Carich reported erratic and unpredictable results. The author concluded that the relationship studied was equivocal at best; this writer questions the methodological soundness of the study for a number of reasons.

Kuiper (1975) explored the question: Do students feel more comfortable if they know where a teacher stands and will they thus learn more? Jourard (1971) discussed a report that mutual self-disclosure between an experimenter and subjects prior to a paired-associates learning task significantly increased the learning of the list. Kuiper believed the implications of this study were "staggering." Using a questionnaire format, Kuiper found that by a margin of 18 to 1, students felt that their best instructors engaged in self-disclosure. A majority of students also reported that teacher self-disclosure stimulates class discussion, makes the class more interesting, and helped them to relax and learn better.

A series of studies by Woolfolk altered the focus by looking at student self-disclosure. In exploring the variables affecting the willingness of students to self-disclose to the teacher, she investigated teacher verbal and non-verbal behavior. The first study (Woolfolk and Woolfolk, 1975) systematically varied the congruence (or lack of it) between the two channels of communication. Fourth

graders were taught a vocabulary lesson by a teacher who behaved in either a congruent or incongruent manner on a positive/negative dimension. Students then completed a questionnaire designed to assess their willingness to self-disclose to the teacher about various topics. An analysis of variance showed that students in the negative verbal/negative nonverbal condition were the least willing to self-disclose, with no significant differences between the three other conditions.

Woolfolk, Garlensky, and Nicolich (1977) replicated the above study with sixth graders and found similar results. Students' scores on self-disclosure willingness were again a direct function of the positiveness of the teacher's verbal behavior, with no effect on the nonverbal dimension.

A study performed by Cooper (1975) provides indirect support for the positive impact of teacher self-disclosure on student perceptions. He compared student perceptions of a teacher as rated by two groups of students; one group had participated in a marathon encounter group with their teacher, the other had not. Students participating in the marathon group with the teacher perceived him to be functioning at higher levels of positive regard, congruence, and empathy than the group who had not had this experience. Cooper attributed this increase to the establishment of more positive teacher/student relationships. As self-disclosure is a major characteristic of encounter group activity, it can be inferred that teacher self-disclosure mediated the increase in positive perceptions.

This brief though complete review of the research on self-disclosure in the classroom gives some support to the notion of self-disclosure as

a potentially important variable in classroom dynamics. The research on the personality dimensions of effective teachers, however, provides much stronger support for the impact a teacher's personal qualities can have on the teaching/learning process. Evidence indicates that dimensions such as sensitivity, warmth, and genuineness can indeed exert a positive influence on students.

The Independent Variables and Predictions

The present study investigated teacher disclosure at differing levels of intimacy to assess the impact of disclosure on student perceptions of the teacher. A basic premise of this study is that teacher self-disclosure has some sort of impact, either positive or negative, on how students perceive him. The problem to be solved centers on the identification of global dimensions of teacher disclosure which have an effect on the perception of attributes associated with effective teaching.

Two kinds of teacher disclosure. As mentioned earlier, previous efforts to manipulate self-disclosure have been directed at either a therapy situation or at the identification of basic parameters of self-disclosure. Consequently, past research provides no clues as to what kinds of disclosure might be instrumental in creating an effective instructional climate.

Assuming that a teacher's disclosure does affect classroom dynamics, several basic questions regarding the underlying process(es) arise. One such question would be: Is it because the teacher is revealing personal information or simply because he is providing an example which clarifies the content of the lecture? To answer this question, teacher self-disclosure vs. disclosure about some other

person is employed as one factor in the present study. The teacher either discloses about himself or he conveys the same information but ascribed it to a friend.

A second basic question concerns the effect of the depth or level of intimacy of the disclosures. Given that numerous studies have indicated different results for varying levels of intimacy of disclosure, three levels (low, medium, high) were employed in the present investigation. Due to the suggestion from prior research of a curvilinear relationship between dimensions of person perception and intimacy level, it was important to include three levels.

The teacher in this study was a male. Since this fact might be expected to affect student perceptions, sex of subject was included as an additional internal factor.

Predictions. Dependent variables employed in this study include items from research on the impact of self-disclosure on person perception (e.g., warm, likeable) and items from factor analytic studies on teaching effectiveness (e.g., organized, knowledgeable). Due to the exploratory nature of this study, specific predictions for each of the dependent measures are not an important part of the study plan. Many measures are included in an effort to identify as many meaningful relationships as possible.

However, past research and the nature of the independent variables suggest that certain general predictions can be made. For each independent variable a main effect is expected for many of the dependent measures. For example, assuming that speaking about oneself generally elicits more positive perceptions than speaking about some other person, results for the disclosure about self vs. other would be

expected to show self-disclosure to be superior in causing the teacher to be perceived more positively across many of the dependent variables. However, there is some past research upon which to base reservations for such an effect; for example, Baron, Byrne, and Griffith (1974) have shown that communicators with similar attitudes are often found to be more attractive to subjects than those with dissimilar attitudes. Consequently, if the teacher communicates attitudes which are incongruent with those of the subject he may not be perceived in as favorable a light.

A curvilinear pattern across levels of intimacy in the self-disclosure condition is expected to appear on many of the dependent measures. Research has indicated that a medium level is most frequently perceived in the most positive way. Additionally, students have both implicit and explicit expectations for what are desirable behaviors in their teachers. It is highly likely that they will perceive the high self-disclosing teacher as one who is behaving inappropriately. Derlega, Lovell, and Chaikin (1976) provide support for this prediction. They found that subjects rated a high disclosing therapist as more acceptable when they expected this as appropriate behavior. Pilot work has indicated students perceive very high levels of disclosure as inappropriate for their teachers.

When comparing the self vs. other variable in the high disclosure level condition, it is expected that "other" will receive higher ratings on many measures. This condition will allow the students to respond positively to the level of disclosure without the concomitant anxiety, threat, or perceived "deviance" of the high self-disclosure.

METHOD

Subjects

The subjects were 96 undergraduates from the University of New Hampshire. Approximately 70 were recruited from introductory psychology courses where participation in experiments constitutes part of the laboratory requirement. An additional 30 subjects were obtained from lower-level courses in the psychology department. In these courses, the experiment was conducted during the regularly scheduled class time. The final sample consisted of 54 females and 42 males.

Design

Figure 1 illustrates the experimental design, which consisted of a 2 x 3 completely crossed factorial design. The type of disclosure factor represented the self vs. other disclosure. Subjects were exposed to either low, medium, or high levels of intimacy of disclosure contained within the context of the lecture presented by the teacher. The topics of disclosure were selected from instruments previously used by Taylor and Altman (1966) and Jourard and Jaffe (1971). In order to insure that the intimacy values assigned to the individual items were appropriate for the population to be used, 57 males and 92 females who were undergraduates at the University of New Hampshire were used as judges. The judges were asked to rate the intimacy value of 46 topics on a scale of 1 - 11 using a Thurstone-type procedure. These ratings, which were consistent with those reported in previous research, provided the intimacy values used. The low condition consisted of statements ranging from 1-3 in level of intimacy, medium ranged from 4-8, and high from 9-11. Examples of statements in the three conditions

FIGURE 1
EXPERIMENTAL DESIGN

		LEVEL OF DISCLOSURE INTIMACY		
		LOW	MEDIUM	HIGH
TYPE OF DISCLOSURE	SELF	N = 18	N = 18	N = 15
	OTHER	N = 15	N = 15	N = 15

are (low) "the types of play and recreation I enjoy"; (medium) "how I feel about getting old"; (high) "my guiltiest secrets."

The two independent variables (type of disclosure and level of intimacy of disclosure) were manipulated within the context of six lectures, each lecture being approximately 25 minutes in duration. Each lecture contained the same basic content, except that manipulations appropriate to each cell were inserted at 11 pre-arranged points in the basic lecture.

Preparation and Content of Lectures

Scripts which were memorized and spoken verbatim were used to insure control of content coverage and several practice sessions with students were conducted. The substance of the lecture was based on several publications primarily from introductory-level texts on counseling and psychotherapy (e.g., Heine, 1971). The basic lecture was written in such a way as to provide 11 places where disclosing of personal information would be appropriate. The basic lecture appears in APPENDIX A.

Six sets of manipulations appropriate for each cell were prepared for insertion into the basic lecture. In the present study the self vs. other factor was operationalized simply by the use of the word "I" for the self disclosure condition and of "my friend" for the other disclosure condition. The intimacy level of the disclosure was based on the ratings previously described. The manipulations for the six cells are included in APPENDIX B.

Teacher

The role of the teacher was played by an experienced lecturer at the University of New Hampshire. He was programmed to deliver the

lectures in a manner that was as standardized as possible across the manipulations. With the exception of necessary grammatical differences in tense, word order, etc., only 11 sets of key words constituted the manipulation of the independent variables. In this respect the experimental manipulations had the "neatness" often found in persuasion research where an independent variable might be operationalized simply by ascribing one communication to two different sources (e.g., Hovland and Weiss, 1951). In addition, the teacher was blind to the dependent variables and to the specific hypotheses being investigated and was paid for his participation in the study.

Procedure

Subjects were run in groups of 15-18 at a time. Treatments were randomly assigned to groups. When students arrived in the classroom they were told that the psychology department was testing a module course in introductory psychology. The purpose of the particular study was to ask their cooperation in market testing the module on "Introduction to counseling and psychotherapy." They were informed that they would be asked to complete an evaluation of the lecture and take a short quiz on the content of the lecture. The students were also told that they would be prohibited from asking questions during the delivery of the lecture. In this manner, teacher communication, other than that which was experimentally manipulated, was controlled.

The experimenter then introduced the teacher. No information about the teacher other than his name was given. (Data from two subjects who had previously had the teacher as an instructor were omitted from data analysis). In every condition he stood in front of the class and delivered the lecture from behind a podium. After completing the lecture

the teacher left the room and the experimenter administered the dependent measures. A debriefing on the purpose of the study was presented as well as a discussion on some of its implications for teaching. Students were also asked to complete an open-ended essay questionnaire on their experiences with and reactions to a self-disclosing teacher.

Dependent Measures

There is a trend in the evaluation of an instructional method or treatment to employ several criteria (Gabriel and Hopkins, 1974). Dimensions of teaching effectiveness are complex; the research clearly indicates the desirability of multiple measurement. Hence, a variety of dependent measures was employed. Some were drawn from teacher effectiveness research, others from the body of literature pertaining to self-disclosure. Another group of items employed included subjects' intentions regarding future interactions with the teacher. Also, a series of items served as manipulation checks for the independent variables. The entire questionnaire is included in APPENDIX C.

Quiz. A brief objective quiz composed of nine questions based on the lecture content was included in the questionnaire booklet. The purpose of the quiz was not to provide a valid measure of achievement (it is much too brief to serve adequately such a purpose), but rather to insure that subjects carefully listened to the lecture.

Person perception scales. The person perception scales were specifically designed for use in this study. The scales asked the students to rate the teacher on a seven-point scale for 18 variables. Dziokonski (1976) indicated that bipolar scaling of items was more sensitive to similar treatments than Likert scaling, and therefore all the scales were bounded by bipolar items with the midpoint defined as neutral.

Subjects indicated with a check mark which of the seven blocks on the bipolar continua corresponded most closely to how they perceive the teacher in relation to each variable. The direction of the bipolar scales was alternated every other one so that for some items the positive pole appeared on the left of the scale, and for others it appeared on the right. This was done to avoid any systematic bias subjects might have in filling in the scales.

One set of items on this scale was drawn from the research on personality dimensions of effective teachers. Each item involved an adjectival description of some aspect of the teacher's behavior as perceived by the students. The major dimensions assessed were those of genuineness, warmth, and empathy. The items assessing these dimensions employed the items warm/cold, understanding/not understanding, genuine/not genuine, accepting/rejecting, caring/not caring, and sensitive/insensitive.

A second group of items on this scale was extracted from research which examined the global qualities of an effective instructor. The items included were pleasant/unpleasant, friendly/unfriendly, informal/formal, experienced/inexperienced, knowledgeable/ignorant, informed/uninformed, and articulate/inarticulate.

An additional set of items was drawn from research which deals with dimensions affected by varying levels of self-disclosure. The items include likeable/unlikeable, open/defensive, trustworthy/untrustworthy, and approachable/unapproachable.

Teacher evaluation form. This form included 13 items which asked the subjects to rate how descriptive the items were of the teacher's performance. A five point scale was used ranging from (1) not at all

descriptive to (5) very descriptive. As this form was very similar to the mandatory rating form used at the University of New Hampshire, students were familiar with this format. Items assessed how interesting the lecturer was, how organized and knowledgeable he appeared, and how effectively he communicated. A fourteenth item--a global one--asked subjects to compare the teacher with other instructors they have had, ranging from (1) among the very worst to (5) among the very best.

Behavioral intentions. A concern with subjects' global perceptions of the teacher is that they do not lend themselves to the use of behavioral measures. Yet students' perceptions may reflect on a behavioral level. For this reason, several items were included to assess the possible future behavior of subjects in relation to the teacher. These items were also scaled on seven-point continua bounded by definitely/definitely not. These items measured wanting to take a course with this teacher and recommending him as an instructor to their friends. They also measured whether the respondent would feel free to ask this teacher questions in class and feel comfortable in approaching this teacher outside of class to discuss the course. Finally, subjects were asked whether they would share their thoughts with this teacher.

Manipulation checks. Several items were embedded in the questionnaire to serve as manipulation checks. One check asked the students to rate how descriptive the item "personalizes material" was of the teacher's behavior. This was included to ensure that students were sensitive to the varying levels of self-disclosure as well as the self/other comparison.

Two items were included to get a sense of how subjects perceived the teacher's level of anxiety. It was important that the teacher did

not appear more nervous, for example, in the high self-disclosure condition than in the low. One item asked for subjects' perceptions of the teacher on a relaxed/nervous dimension; the other asked subjects to rate how "comfortable the teacher appeared to be."

Two items were included because intuitively they did not appear to be susceptible to the experimental manipulations. These included "spoke understandably" and "used a well-modulated tone of voice."

Data analysis. A multivariate analysis of variance was performed on the 37 dependent measures. When using multiple dependent measures, a multivariate approach is preferred (Gabriel and Hopkins, 1974; Reising, Ward, and Rolik, 1977), since it considers all dimensions simultaneously. When many univariate analyses are used, the probability of finding a difference where none exists is no longer at the nominal (e.g., $\alpha = .05$) level. Also, univariate analyses treat each dependent variable as if they were uncorrelated with any other dependent measure. A multivariate approach, however, uses the correlations among dependent variables in its procedures. As it was expected that many of the dependent measures of this study would be highly correlated (e.g., "warm" and "likeable"), multivariate analysis takes advantage of this information.

Within-cell correlations among the dependent measures were computed to assess the interrelationships. Univariate analyses of variance were also computed for further exploratory purposes.

RESULTS

For convenience in presenting and discussing results, self-disclosure vs. disclosure about another person is referred to as the self/other factor and the level or depth of intimacy is referred to simply as the level factor.

Initial analyses showed no significant effects on the variable of subject sex, so all subsequent analyses were performed collapsing across the sex factor.

Manipulation Checks

The check on the experimental manipulations of the type and level of disclosure indicated that subjects perceived the manipulations appropriate to their experimental conditions. Figure 2 shows the means for all conditions for the item "Personalizes material". Univariate analysis of variance showed: (1) a significant effect for type of disclosure ($p < .001$) with self receiving higher ratings than other, and (2) a marginally significant effect for level of disclosure ($p < .06$), with medium and high receiving the same ratings and low with the lowest ratings. Simple main effects were calculated at each level of disclosure for the self/other factor. For each level, self was significantly greater than other (Low: $F=12.44$, $df=1,90$, $p < .001$; Medium: $F=10.18$, $df=1,90$, $p < .002$; High: $F=3.99$, $df=1,90$, $p < .05$). It appears, then, that subjects perceived the self-disclosing lectures to be significantly more personalized than those in the other condition.

Analysis of variance on the item "Appears comfortable in class" revealed no significant main effects or interaction. It seems that subjects across all conditions perceived the teacher to be at virtually

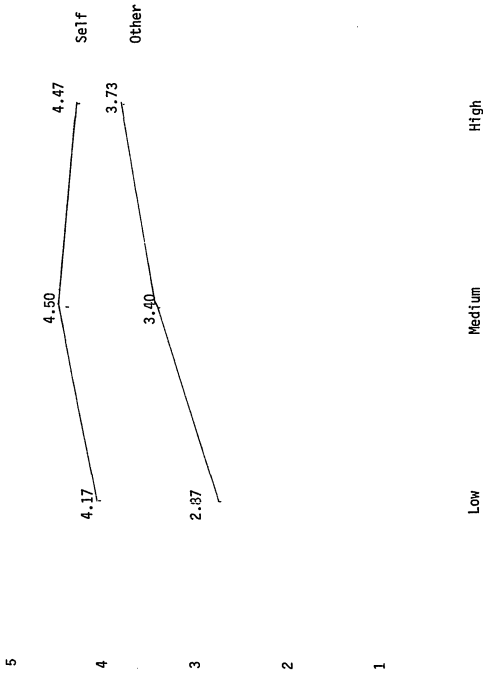


Figure 2. Means for all conditions on the item "Personalizes material"

the same level of comfort in his role. This is important, as any person, no matter how well rehearsed, could possibly feel and appear uncomfortable revealing highly personal information to strangers.

The items "Spoke understandably" and "Used a well-modulated tone of voice" showed no significant effect on either the level factor or interaction. However, they did show a significant main effect on the type of disclosure ($F=4.23$, $df=1,90$, $p<.05$; $F=4.04$, $df=1,90$, $p<.05$); Other was rated higher than Self. Tests of simple effects revealed this effect to be occurring at the high level of disclosure when comparing the self/other factor ($p<.01$ for both items).

Analysis of MANOVA

The means for all 37 dependent measures for the six-cell design are presented in Table 1. In this and in all succeeding reporting of results, higher values indicate more positive perceptions of and intentions toward the teacher. The principal analysis was a 2×3 multivariate analysis of variance (MANOVA) for the entire "package" of 37 dependent measures. This technique allows for a heuristic approach to the data consistent with the major purposes of the study.

The F values obtained by MANOVA are reported in Table 2. Significant main effects were obtained for the self/other factor ($p<.001$) and for level ($p<.008$). The interaction between the two independent variables was not statistically significant, though it did approach it ($p<.075$).

The multivariate analog to simple main effects (i.e., special order of effects) was performed at both types and all levels of disclosure. A significant main effect occurred at Self ($p<.01$), but not at Other. In reference to level of intimacy, significant simple effects were found at low ($p<.02$) and at high ($p<.001$), but not at medium.

TABLE 1
 MEANS FOR EACH DEPENDENT MEASURE, TYPE OF DISCLOSURE BY
 LEVEL OF DISCLOSURE

	Type	Level		
		Low	Medium	High
1. Warm	Self	5.44	6.11	4.80
	Other	5.27	5.00	5.93
2. Understanding	Self	4.94	5.39	4.67
	Other	5.33	4.33	6.00
3. Likeable	Self	5.28	5.89	4.47
	Other	5.67	5.07	6.00
4. Genuine	Self	5.44	5.44	4.60
	Other	4.93	4.40	5.40
5. Accepting	Self	5.00	5.72	5.07
	Other	5.60	4.93	5.67
6. Caring	Self	4.89	5.39	4.80
	Other	4.93	4.80	5.80
7. Pleasant	Self	5.83	6.00	3.93
	Other	5.60	5.93	6.07
8. Open	Self	5.28	6.11	6.00
	Other	5.27	4.13	5.40
9. Friendly	Self	5.72	5.94	5.07
	Other	5.47	5.67	5.93
10. Relaxed	Self	4.28	4.39	4.00
	Other	4.20	3.20	3.60
11. Trustworthy	Self	4.78	5.78	4.20
	Other	5.13	4.53	4.93
12. Sensitive	Self	4.94	5.78	4.47
	Other	5.33	5.27	5.80
13. Approachable	Self	5.00	5.78	4.87
	Other	4.73	4.60	5.67
14. Informal	Self	4.72	5.22	5.13
	Other	4.33	4.27	6.07
15. Experienced	Self	4.94	5.11	4.00
	Other	3.93	3.73	3.93
16. Knowledgeable	Self	5.83	5.83	4.93
	Other	6.13	5.07	5.60
17. Informed	Self	5.83	6.06	4.80
	Other	5.73	5.53	5.93

Table 1 (continued)

		Level		
	Type	Low	Medium	High
18. Articulate	Self	5.28	5.28	4.40
	Other	5.53	4.93	5.47
19. Stimulated interest in the subject	Self	3.22	3.89	2.33
	Other	3.80	3.00	3.13
20. Presented material in an interesting way	Self	3.17	3.83	2.07
	Other	3.73	3.20	3.47
21. Explains clearly	Self	3.67	3.56	2.40
	Other	4.27	3.53	3.73
22. Is well prepared	Self	4.39	3.89	3.20
	Other	4.33	4.13	3.87
23. Presented in a well organized way	Self	4.06	3.83	2.73
	Other	4.47	4.00	3.73
24. Communicates knowledge effectively	Self	3.56	3.94	2.20
	Other	4.40	3.20	3.80
25. Makes good use of examples	Self	3.56	4.17	2.73
	Other	4.20	4.07	3.73
26. Is enthusiastic	Self	3.72	4.11	2.87
	Other	3.67	3.67	3.87
27. Knew subject matter	Self	4.28	4.22	3.33
	Other	4.07	3.80	4.07
28. Appears comfortable	Self	3.61	3.56	3.00
	Other	3.20	2.80	3.13
29. Personalizes material	Self	4.17	4.50	4.47
	Other	2.87	3.40	3.73
30. Spoke understandably	Self	3.78	3.83	2.93
	Other	4.27	3.67	4.00
31. Used a well-modulated tone of voice	Self	3.94	3.67	3.00
	Other	4.07	3.87	3.93
32. How does he compare with other teachers	Self	3.33	3.83	2.20
	Other	3.13	2.93	3.27
33. Would take a course with him	Self	4.72	5.61	2.73
	Other	5.00	4.33	4.73
34. Would recommend him to others	Self	4.61	5.39	2.93
	Other	4.67	4.00	4.80
35. Would feel free to ask questions in class	Self	5.33	5.61	4.93
	Other	5.47	4.67	6.27
36. Would feel comfortable in approaching	Self	5.50	5.61	4.67
	Other	5.27	4.53	6.23
37. Would share my thoughts with him	Self	4.44	4.94	4.60
	Other	5.00	3.80	5.47

TABLE 2
SUMMARY OF RESULTS OF MANOVA

Effect	F	p-value
Type of disclosure	3.092	.001
Level of disclosure	1.666	.008
Interaction	1.354	.075
Simple effects		
Level at self	1.572	.016
Level at other	1.329	.088
Type at low	1.882	.017
Type at medium	1.345	.158
Type at high	2.475	.001

The global F values reported here are of interest in that they indicate the experimental manipulations (both type and level of disclosure) had highly significant overall effects. This is especially important in view of the fact that MANOVA utilizes the intercorrelations between all dependent measures in computing F values, thus preventing redundancy in reporting significant results. However, meaningful interpretations of the specific effects of the manipulations require an exploration of the univariate relationships. Fortunately, the significant global effects legitimize this additional probing analysis.

Univariate Analyses of Variance

Due to the exploratory nature of the study and the complexity of the results, it would not be feasible to discuss each dependent measure individually. Consequently, patterns of results across the dependent measures will be examined in line with the predictions. Complete summaries of all statistical analyses appear in APPENDIX D. Data from an additional group are also included in summary form in APPENDIX E. This group was originally intended to serve as a control group; subjects listened to the same content of the lecture with no experimental manipulations. However, as this significantly shortened the length of time subjects were exposed to the teacher, it was decided to omit their ratings from the analysis.

Interaction between the independent variables. Although the global MANOVA test on the interaction between the two independent variables did not give evidence of a highly significant effect, it did approach the conventional level of significance ($p < .075$). A comparison of the graphical depiction of each dependent measure and those measures which showed a significant univariate effect on the interaction revealed

some interesting patterns. As predicted, the ratings of the teacher on many of the dependent measures formed a curvilinear pattern in the self-disclosing condition, with medium disclosure associated with the highest (most positive) point. (An informal examination of the graphs showed that 34 of the dependent measures, i.e., 91.8%, approximated this curvilinear relationship, some to a greater degree than others.) All graphs for the dependent measures appear in APPENDIX F. The measures in the Other condition frequently formed a curvilinear pattern in the opposite direction, with medium being the lowest point. Figures 3 and 4 provide examples of this pattern of interaction which consistently appeared across many measures. Twenty-three measures (62.2%) showed a significant interaction; nineteen of these (77.7% of significant interaction tests) followed this same pattern. The remaining four significant interactions approximated this pattern, primarily in the self-disclosure condition. Results are summarized in Table 3.

In short, it appears that the curvilinear pattern across the levels of intimacy is a strong and consistent finding.

Self/Other comparisons across levels of intimacy. Simple effects tests were performed comparing self/other ratings at each level of intimacy. As specific predictions were made based on the level of disclosure, it is necessary to examine these results.

The MANOVA for the effect of the self/other factor at low level of intimacy was significant ($F=1.88$, $df=37,54$, $p<.02$). However, univariate tests of simple effects revealed only two significant effects on dependent measures at this level. On the item "Communicates knowledge effectively", Other was rated higher than Self ($p<.04$). For the item "Personalizes material", Self was rated higher than Other ($p<.001$). It appears that subjects were aware of the differences in

the degree to which the teacher revealed himself, but these perceptions did not affect their ratings on specific dimensions. This is congruent with expectations as no real differences were predicted to occur at the low level of intimacy.

Although the MANOVA test of simple effects for type of disclosure at the medium level of intimacy was not significant ($p < .15$), examination of the univariate tests on different dependent measures uncovered some interesting patterns. Fourteen measures were highly significant ($p < .05$ or better); five measures were marginally significant ($p < .07$). On all nineteen measures which produced significant simple effects at the medium (51.3% of the total measures), self-disclosure was rated higher than other disclosure. This is clearly in line with expected results. Table 4 summarizes these results.

Strongly in line with predictions were the results of self/other comparisons at the high level of intimacy. The MANOVA test of this simple effect was highly significant ($p < .001$). Twenty-six of the entire set of 37 dependent measures showed significant univariate tests. Twenty-five of these tests showed Other to be rated significantly higher than self-disclosure. In other words, 67.5% of the total set of measures showed Other to be rated more positively than self-disclosure. The one item which produced a significant univariate test, but in the opposite direction (i.e., Self rated higher than Other) was the item "Personalizes material". This is a good indication that subjects were aware of the greater degree of personalization of the material in the Self condition. However, as predicted, they did not respond in a positive manner to this high level of revealingness. These results are summarized in Table 5.

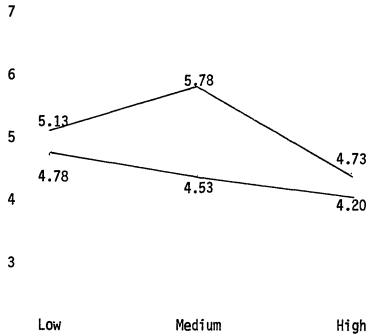


Figure 3. Significant interaction on the item "Trustworthy"

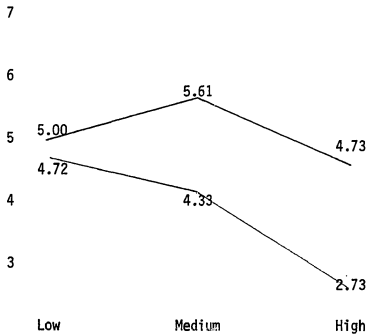


Figure 4. Significant interaction on item "Would take a course with him"

TABLE 3

Summary of results of significant univariate tests on the interaction

Variable	F _{2,90}	p-level
Warm	6.941	.002
Understanding	4.908	.009
Likeable	6.552	.002
Accepting	3.062	.052
Pleasant	13.043	.001
Open	4.745	.011
Trustworthy	5.178	.007
Sensitive	5.424	.006
Approachable	3.899	.024
Knowledgeable	3.302	.041
Informed	3.807	.026
Stimulated interest	6.175	.003
Presented in interesting manner	7.190	.001
Explains clearly	3.694	.029
Communicated effectively	10.188	.001
Is enthusiastic	5.157	.008
Knew subject matter	3.543	.033
How does he compare	10.776	.001
Would take a course	9.698	.001
Would recommend him	10.430	.001
Would ask questions	4.680	.012
Would approach him	6.181	.003
Would share thoughts with him	3.208	.045

TABLE 4
Summary of results of significant univariate tests on
Type factor at Medium disclosure

Variable	F _{1,90}	p-level
Warm	7.415	.008
Understanding	3.619	.060
Likeable	3.468	.066
Genuine	3.515	.064
Open	17.591	.001
Relaxed	4.449	.038
Trustworthy	8.059	.006
Approachable	5.967	.017
Experienced	5.250	.024
Knowledgeable	3.409	.068
Stimulated interest	6.446	.013
Communicated effectively	4.177	.044
Appears comfortable	4.256	.042
Personalizes material	10.178	.002
How does he compare	10.283	.002
Would take a course	6.973	.010
Would recommend him	8.562	.004
Would approach him	3.752	.056
Would share thoughts	3.312	.072

Note: Direction is S>O for all items.

TABLE 5

Summary of results of significant univariate tests on
Type factor at High disclosure

Variable	F _{1,90}	p-level
Warm	6.748	.011
Understanding	5.736	.019
Likeable	10.623	.002
Caring	4.322	.040
Pleasant	33.068	.001
Friendly	4.173	.044
Sensitive	10.864	.001
Informed	6.401	.013
Articulate	5.012	.028
Stimulated interest	4.392	.039
Presented in interesting manner	12.845	.001
Explains clearly	13.692	.001
Well prepared	4.210	.043
Presented in organized way	7.755	.007
Communicated effectively	17.247	.001
Made good use of examples	5.108	.026
Is enthusiastic	8.938	.004
Knew subject	4.884	.030
*Personalizes material	3.989	.049
Spoke understandably	7.618	.007
Used well-modulated tone of voice	6.794	.011
How does he compare	11.907	.001
Would take a course	13.840	.001
Would recommend him	13.123	.001
Would ask questions	6.147	.015
Would approach him	8.162	.005

*Indicates direction is S>O

Note: For all other items, direction is O>S.






















Level of intimacy comparisons across types of disclosure. Tests of simple effects on the level of disclosure at each type of disclosure were performed. As a priori predictions had been made, tests of planned comparisons were computed for the dependent measures showing significant univariate tests of simple effects.

The MANOVA test for level of intimacy at the Self condition was significant ($p < .02$). Twenty-one dependent measures showed significance on the univariate tests ($p < .05$ or better). An ordering of the means for each significant measure from highest to lowest ratings showed the high level of disclosure to receive the lowest ratings for all 21 measures. On fifteen of these measures medium was rated most positively. Tests of planned comparisons revealed the significant differences were occurring between low vs. high or medium vs. high. On only three items ("Trustworthy", "Sensitive", and "Stimulated interest") was medium disclosure rated significantly higher than low disclosure. It appears that the overall trend was in the predicted direction with the medium level of intimacy receiving the most positive ratings, but few statistically significant differences existed between low and medium. As expected, high levels of self-disclosure produced the lowest ratings. These results are presented in Table 6.

The MANOVA test for level of intimacy at the Other condition was only marginally significant ($p < .09$). Eight dependent measures produced significant univariate effects. Tests of planned comparisons showed the differences to be occurring when contrasting the medium with the high level of disclosure. A general pattern on the eight measures was that the high level of other disclosure received the most positive ratings and medium received the lowest. Table 7 summarizes these results.

TABLE 6

Summary of results of significant univariate tests on
Level of disclosure at Self

Variable	F _{2,90}	p-level	Order*
Warm	4.992	.009	M  H
Likeable	4.775	.011	M  H
Pleasant	19.280	.001	M  H
Trustworthy	6.307	.003	M  H
Sensitive	5.739	.005	M  H
Knowledgeable	3.180	.046	L  H
Informed	4.650	.012	M  H
Stimulated interest	8.922	.001	M  H
Presented in interesting manner	10.770	.001	M  H
Explains clearly	7.333	.001	L  H
Is well prepared	7.023	.001	L  H
Presented in organized way	7.681	.001	L  H
Communicates effectively	11.349	.001	M  H
Made good use of examples	5.383	.006	M  H
Is enthusiastic	7.597	.001	M  H
Knew subject	5.388	.006	L  H
Spoke understandably	3.291	.042	M  H
Uses a well-modulated voice	3.625	.031	L  H
How does he compare	15.775	.001	M  H
Would take a course	15.803	.001	M  H
Would recommend him	12.589	.001	M  H

*Indicates the results of the tests of planned comparisons in the following manner: solid line = $p < .01$; dotted line = $p < .05$.

TABLE 7
Summary of results of significant univariate tests on
Level of disclosure at Other

Variable	F _{2,90}	p-level	Order*
Understanding	4.541	.013	H <u>L</u> M
Open	7.148	.019	H <u>E</u> M
Informal	5.867	.004	H <u>L</u> M
Knowledgeable	3.195	.046	L <u>H</u> M
Communicated effectively	4.851	.010	L <u>H</u> M
Would ask questions	4.426	.015	H <u>L</u> M
Would approach	4.827	.010	H <u>L</u> M
Would share thoughts with him	3.793	.026	H <u>L</u> M

*Indicates the results of the tests of planned comparisons in the following manner: solid line = $p < .01$; dotted line = $p < .05$.

Correlational Analysis

Intercorrelations among all 37 variables were computed. Within-cell correlations, rather than between-cell, were calculated, as this technique assesses the relationships among variables separate from the effect of the independent variables. Stated somewhat differently, it is possible to assess the interrelationships of the measures independent of the differential impact of the experimental manipulations.

Correlations between variables are presented in Table 8. As expected, many of the dependent measures were highly correlated in a positive direction. No significant negative correlations were found. Only three items ("Open", "Informal", and "Relaxed") were not highly correlated with many other dependent measures. Because a correlation coefficient of .35 would be highly significant ($p < .001$), it would be too cumbersome to report all coefficients individually. Consequently, an arbitrary point ($r \geq .5$) was selected for the sake of convenience. As the MANOVA calculations take all of the intercorrelations into account, this information is not as crucial as it would be with a completely univariate approach.

For organizational purposes, reporting of intercorrelations among the dependent measures is grouped conceptually into the following categories: (1) personality dimensions of the teachers, (2) professional (skill) dimensions of the teacher's performance and (3) behavioral intentions of the students in reference to future interactions with the teacher. Since the data do not lend themselves to factor analysis, only a global conceptual categorization is presented here. The overall item, "How does this teacher compare to other teachers?", was highly correlated with items in all three of the above-mentioned categories.

TABLE 8 : Within-cells correlations of dependent measures

Variable	1	2	3	4	5	6	7	8	9
1. Warm									
2. Understand	.411								
3. Likeable	.691	.564							
4. Genuine	.594	.473	.604						
5. Accepting	.600	.530	.650	.472					
6. Caring	.541	.584	.659	.587	.684				
7. Pleasant	.675	.400	.674	.479	.663	.565			
8. Open	.336	.454	.450	.370	.434	.329	.431		
9. Friendly	.557	.337	.545	.391	.498	.460	.619	.381	
10. Relaxed	.158	.312	.323	.252	.218	.227	.219	.298	.176
11. Trustworthy	.415	.436	.624	.398	.469	.403	.402	.395	.287
12. Sensitive	.518	.453	.638	.519	.529	.620	.541	.379	.439
13. Approachable	.543	.667	.625	.568	.575	.588	.548	.379	.481
14. Informal	.245	.124	.181	.159	.134	.236	.245	.184	.274
15. Experienced	.278	.406	.523	.434	.299	.360	.400	.302	.277
16. Knowledgeable	.503	.515	.698	.426	.570	.553	.641	.384	.472
17. Informed	.422	.416	.524	.374	.439	.459	.582	.411	.334
18. Articulate	.454	.391	.556	.414	.415	.482	.502	.362	.430
19. Stimulate	.404	.402	.555	.483	.389	.496	.415	.314	.276
20. Present	.484	.293	.498	.492	.479	.421	.518	.278	.393
21. Clear	.371	.360	.383	.470	.486	.562	.441	.272	.281
22. Prepared	.201	.220	.416	.290	.343	.384	.377	.184	.267
23. Organized	.170	.276	.347	.306	.416	.413	.300	.195	.232
24. Communicated	.277	.331	.397	.354	.341	.412	.422	.386	.286
25. Examples	.325	.281	.323	.422	.331	.304	.333	.323	.370
26. Enthusiastic	.445	.132	.219	.364	.435	.346	.452	.330	.349
27. Knew	.319	.377	.534	.350	.463	.442	.425	.369	.220
28. Comfortable	.307	.299	.351	.418	.266	.214	.344	.255	.298
29. Personalized	.225	.367	.350	.364	.232	.273	.237	.430	.252
30. Spoke	.210	.385	.366	.375	.270	.373	.326	.349	.156
31. Voice	.387	.339	.379	.394	.490	.427	.481	.303	.255
32. Compare	.516	.406	.615	.535	.454	.450	.551	.324	.320
33. Take	.612	.522	.727	.590	.553	.530	.576	.388	.473
34. Recommend	.575	.554	.730	.636	.581	.516	.620	.409	.479
35. Ask	.280	.238	.238	.130	.249	.123	.402	.389	.303
36. Approach	.382	.354	.494	.354	.422	.321	.528	.255	.352
37. Share	.412	.391	.533	.398	.401	.438	.488	.272	.280

Variable	10	11	12	13	14	15	16	17	18
10. Relaxed									
11. Trustworthy	.244								
12. Sensitive	.291	.604							
13. Approachable	.319	.541	.508						
14. Informal	.062	.113	.118	.323					
15. Experienced	.509	.419	.346	.489	-.020				
16. Knowledgeable	.426	.521	.621	.502	.120	.625			
17. Informed	.311	.496	.560	.482	.059	.555	.769		
18. Articulate	.259	.365	.550	.468	.144	.385	.611	.561	
19. Stimulate	.324	.505	.593	.463	.096	.426	.477	.460	.473
20. Present	.239	.440	.487	.474	.226	.311	.424	.420	.340
21. Clear	.220	.264	.415	.434	.166	.351	.472	.525	.455
22. Prepared	.179	.265	.371	.253	.022	.394	.588	.519	.486
23. Organized	.228	.331	.399	.341	.044	.313	.517	.508	.392
24. Communicated	.244	.394	.376	.413	.361	.238	.533	.422	.425
25. Examples	.271	.348	.381	.347	.032	.347	.395	.476	.269
26. Enthusiastic	.129	.297	.325	.313	.294	.184	.279	.335	.241
27. Knew	.185	.418	.447	.349	-.066	.433	.680	.603	.528
28. Comfortable	.547	.328	.222	.385	.187	.469	.352	.286	.282
29. Personalized	.282	.323	.291	.406	.279	.304	.332	.328	.366
30. Spoke	.249	.361	.242	.414	.165	.341	.359	.385	.377
31. Voice	.139	.428	.364	.427	.162	.362	.455	.429	.415
32. Compare	.448	.499	.517	.489	.131	.596	.546	.483	.442
33. Take	.313	.574	.510	.612	.188	.492	.560	.491	.440
34. Recommend	.389	.590	.574	.703	.166	.607	.670	.608	.534
35. Ask	.259	.272	.232	.380	.315	.243	.371	.350	.363
36. Approach	.323	.455	.423	.555	.111	.491	.586	.561	.522
37. Share	.278	.492	.465	.487	.150	.408	.589	.520	.438

Variable	19	20	21	22	23	24	25	26	27
19. Stimulate									
20. Present	.705								
21. Clear	.493	.448							
22. Prepared	.424	.387	.548						
23. Organized	.397	.384	.672	.688					
24. Communicated	.466	.555	.594	.433	.562				
25. Examples	.365	.588	.343	.398	.339	.367			
26. Enthusiastic	.386	.554	.473	.213	.270	.424	.458		
27. Knew	.453	.387	.533	.628	.554	.543	.435	.361	
28. Comfortable	.429	.553	.265	.318	.306	.367	.453	.318	.303
29. Personalized	.361	.399	.263	.370	.327	.348	.407	.320	.321
30. Spoke	.378	.395	.535	.375	.423	.534	.294	.318	.472
31. Voice	.476	.480	.569	.287	.372	.526	.348	.580	.514
32. Compare	.517	.591	.459	.439	.402	.486	.495	.448	.439
33. Take	.680	.648	.490	.422	.376	.503	.370	.387	.411
34. Recommend	.656	.644	.508	.451	.455	.559	.420	.413	.522
35. Ask	.195	.380	.108	.212	.177	.382	.265	.342	.286
36. Approach	.431	.408	.262	.365	.326	.352	.326	.191	.413
37. Share	.474	.421	.231	.346	.315	.362	.307	.287	.450

Variable	28	29	30	31	32	33	34	35	36
28. Comfortable									
29. Personalized	.503								
30. Spoke	.448	.472							
31. Voice	.278	.201	.555						
32. Compare	.516	.416	.436	.486					
33. Take	.417	.316	.372	.537	.657				
34. Recommend	.438	.389	.386	.523	.699	.886			
35. Ask	.416	.352	.275	.193	.265	.243	.364		
36. Approach	.402	.315	.357	.312	.383	.442	.590	.633	
37. Share	.420	.420	.376	.273	.371	.442	.555	.541	.785

Personality dimensions. As expected, measures of the subjects' perceptions of the personal dimensions of the teacher (e.g., warm, likeable, caring) were highly correlated. For example, subjects' perceptions of the teacher's warmth were highly correlated with their perceptions of his sensitivity. Personal dimensions were highly related to professional dimensions (e.g., knowledgeable, articulate and stimulating) and behavioral intentions (e.g., take a course from him or recommend him to others). "Likeable" was highly related ($r=.6$) to "knowledgeable" and "would take a course with him" as well as with "understanding."

Professional dimensions. Ratings of skill dimensions of the teacher's performance were highly intercorrelated. For example, "knowledgeable", "experienced", "prepared" and "organized" were all intercorrelated at $r=.5$ and greater. These measures were also highly correlated with personal qualities and behavioral intentions.

Behavioral intentions. As indicated, the variables which measure subjects' intentions with regard to future interactions with the teacher were highly correlated with the other two categories.

Manipulations checks. Correlational analysis revealed that two of the manipulation checks (i.e., spoke understandably, used a well-modulated tone of voice) were not the independent dimensions they were assumed to be. Both items were significantly correlated with many other items. For example, "voice" was highly correlated ($p<.001$) to personal dimensions (e.g., accepting and trustworthy) as well as skill dimensions (e.g., knowledgeable, stimulated interest, explains clearly). This item was also highly related to the global rating item in addition to the behavioral intentions (e.g., would take a course with him).

The item "appears comfortable in class" was highly correlated with items from each of the three categories. This held true for the item "personalizes material", though fewer correlations were evident here. These two items were highly correlated with each other.

Quiz scores. Although there were no significant main effects for the independent variables on quiz scores, there was a significant interaction ($F=3.30$, $df=2,95$, $p=.04$). Data from quiz scores are presented in APPENDIX G.

DISCUSSION

The first part of this discussion deals with interpretations of the findings. Since the results of this study are both many and complex, discussion of them will be broken down into three sub-topics: global effects, interaction, and comparison of types of disclosure at levels of intimacy. As there is little precedence for interpretation of teacher self-disclosure, much of what follows is highly speculative. The second part of this section will focus on implications for future research as well as practical concerns.

Global Effects

As both independent variables produced highly significant MANOVA main effects, it seems clear that type of disclosure and the level of intimacy of disclosure had a global impact on subjects' perceptions of the teacher. Interpretation of the impact of these manipulations is not easy; in spite of the many significant results, individual items reappear and disappear across the statistical analysis. This inconsistency is not as disappointing as it is confusing, for it does not allow specific statements to be made as to exactly what elements teacher disclosure affects. Therefore, the overall pattern of results, highlighted by individual items, is the focus.

The results of this study are in some ways reminiscent of the "Dr. Fox effect" (Naftalin, Ware and Donnelly, 1973). Dr. Fox (in reality a professional actor) was able to earn high student evaluations of an "empty" lecture delivered in a highly seductive style (humorous, enthusiastic, charismatic). The authors concluded that the use of student satisfaction ratings was not a sufficient means of evaluating

instructional effectiveness. However, further investigation of the Dr. Fox effect showed that students exposed to highly seductive lectures performed better on an achievement test than students who viewed the less seductive lecture (Ware and Williams, 1975). Students also gave higher ratings to the seductive lectures.

A possible explanation of the global effects of the present study is that the two independent variables were functioning in such a way as to increase the appeal of the lecture. It would seem unlikely that any teacher in an actual class setting would disclose as frequently in such a short period of time as the teacher in this study. This uniqueness in style--regardless of specific type or level--may have generally increased student perceptions of the lecturer's "charisma". It may be appropriate to add the "Dr. High effect" (the name of the teacher in the present study) as a corollary to the Dr. Fox studies.

Subjects' post-experimental questionnaires provide some support for this notion. In spite of the fact that many subjects reported they had never given much thought to teacher self-disclosure (e.g., "I've always felt it but never fully understood it") hindsight allowed them to say that self-disclosing teachers were more interesting and effective. One subject went so far as to state, "If more teachers were trained to share themselves along with their knowledge, maybe there would be more interested students in school today."

It seems highly plausible that the experimental manipulations generally increased the seductiveness or interest-value of the lecture. This would account not only for the highly significant multivariate effects of the independent variables, but for the lack of consistent effects on the dependent measures as well. Subjects may be differentially

influenced on specific dimensions by the seductiveness of a lecture. It may also be that a "Dr. High effect" will have more global rather than specific effects; subject ratings may be their own unique translation of a general effect to individual items. Obviously, further research is warranted to determine the specific effects of teacher disclosure.

The item "communicates knowledge effectively" was the only measure to appear significant on all tests. This may be an indication of the importance of this item. As mentioned in the introduction, skill is the major factor to which students react when evaluating a teacher's performance. Kulik and Kulik (1974) state that "the teacher who is rated as skillful by students seems to differ from the low-rated teacher on a cluster of measures having to do with communication ability" (p. 54). It seems clear that this dimension of communication ability is indeed of utmost importance.

It is of interest to note that the item pertaining to the teacher's genuineness did not appear as significant on any univariate test. This result was unexpected. This indicates the teacher was perceived at the same level of genuineness in all six conditions. It is possible that engaging in any type of disclosure at different levels is seen as being yourself in the classroom. Chittick and Himelstein (1967) showed that situational factors were more potent in influencing self-disclosing behavior than were personality variables. The context of the classroom--as well as the concomitant role expectations of the teacher--could be operating to override any differential perceptions of genuineness. Further exploration of this question could be accomplished by similar manipulations in varying situations.

Interaction

The curvilinear pattern of results across many of the dependent measures is perhaps the most interesting finding of this study. These patterns can be viewed as providing additional support for the contention that the experimental manipulations functioned to alter the "charisma" of the lecturer, hence exerting their impact at the global rather than specific level. The question to be answered here is why this particular pattern?

In reference to the pattern of self-disclosure, Cozby (1973) reviewed the research on the relationship of self-disclosure to mental health. He believed the contradictory results were due to the fact that investigators were searching for a linear relationship. He proposed the existence of a curvilinear relationship: a person who discloses too little or too much is perceived as less mentally healthy than a medium discloser. There also exists strong support for a curvilinear relationship between self-disclosure and liking for the discloser (Cozby, 1972). His study also reported a basically curvilinear relationship on the variables well-adjusted, discreet, intelligent, and honest. It appears that differing levels of intimacy of disclosure alter the reactions to the discloser. Applying the same logic to the classroom (with the student ratings being an instance of person perception) is a relatively easy step to take. Further explanations as to the particular shape of the curve are pursued in later sections which examine specific levels of intimacy.

The question as to the "why" of the consistent pattern in the Other disclosure condition is not easy to answer. Although not nearly as noticeable as the self-disclosure pattern, there was a tendency for

a pattern to appear on several dependent measures. The pattern suggests that a teacher who chooses to disclose at a medium level should do so in a self mode in order to be perceived positively. Perceptions of a teacher disclosing at a high level of intimacy are most positive when the disclosure is about some other person.

Assuming that the literature is correct in asserting a medium level of intimacy to be the global optimum level of disclosure, perhaps the medium other disclosure is incongruent with subject attitudes and preferences. For example, many subjects on the post-experimental questionnaire indicated a medium level of disclosure to be preferred because it serves to increase student/teacher rapport. Cohen and Berger (1970) provide support for subject emphasis on the rapport factor. They found that "student-centered" factors (e.g., rapport and interaction with students) predicted student achievement better than factors associated with course structure. Morstain (1977) reported that instructors with high scores on student interaction dimensions generally received high student ratings. Hence, there is strong support for the importance of rapport from a student perspective. A teacher who discloses at a medium level in an impersonal way may be frustrating to students as he sends conflicting messages: willingness to disclose at a medium level, but only about some other person. This may induce a situation somewhat analagous to an approach/avoidance conflict, i.e., approach because of level of intimacy, but avoid because there is no real personal involvement.

Granted this is highly speculative, but it merits further consideration. When listing the positive consequences of teacher self-disclosure, subjects invariably mentioned that this behavior makes

teachers more approachable and human, thus increasing positive relationships between student and teachers. This student/teacher relationship was a crucial point in subjects' self-reports. If this is as important as it appears to be, the medium-other disclosing teacher may be communicating attitudes which are incongruent with those of the subjects. This incongruence between teacher and student attitudes may be leading to the trend to rate the medium-other lecture lower. Good and Good (1973) show the importance of congruence between student and teacher attitudes. Speculation as to why the high-other condition was rated in such a positive manner is presented in a later section.

Comparisons of Type of Disclosure at Varying Levels of Intimacy

Type of disclosure at low intimacy. Significant multivariate effect for the comparison between self and other disclosure at a low level is difficult to interpret. A significant multivariate effect indicates that something is occurring, but the technique provides no further information. The fact that only two of 37 items produced a significant univariate effect provides little assistance in interpretation. "Communicates knowledge effectively" was significant ($p .04$) with other rated more positively than self-disclosure. "Personalizes material" was highly significant ($p < .001$) with self rated higher than other. Few differences between the self/other comparison at this level were expected. With so few measures showing significant effects, it appears that either type of disclosure at a low level has little impact on specific dimensions of student perceptions.

Type of disclosure at medium intimacy. The results of the self/other comparison at the medium level of intimacy produced interesting results. It should be noted that no significant multivariate effect

was found here. Hence, interpretations of results should be tempered. This lack of a significant multivariate effect was not expected. It appears that a medium level has no global effect, but rather exhibits its influences in specific areas.

When examining the dependent measures which showed significant univariate effects, it is possible to cluster the items into two categories: (1) personality dimensions, and (2) behavioral intentions. For all nineteen items showing a significant effect, self-disclosure was rated higher than other disclosure. The implication is that teachers who are interested in being perceived positively in reference to their personality characteristics do well to disclose in a personally revealing way.

Several items which showed univariate effects are those which have appeared in research on dimensions of effective teaching. For example, "warm" showed highly significant effects on several analyses. Several studies (e.g., Elmore and LaPointe, 1975; Elmore and Pohlmann, 1978; Solomon, Bezdek, and Rosenberg, 1964) demonstrated that teacher warmth was an important variable which influenced student ratings. Within this context, it is of interest to note that the sole global item of evaluation ("How does this teacher compare with other teachers?") produced a highly significant effect on type of disclosure at medium intimacy (self rated higher than other disclosure). Hence, the present study corroborates the relationship previously found between teacher warmth and student ratings of teacher effectiveness. It is also in line with a study by Chaiken and Derlega (1974) that reported increased perceptions in warmth as a function of self-disclosure.

Only one item (other than "communicates effectively") clearly related to professional skill showed a significant effect at the medium level ("experienced"). In order to account for this lack of impact on professional dimensions it is necessary to explore an area untouched in the present study, i.e., student characteristics. It is quite likely that a population primarily composed of students with a high interest in student/teacher rapport would respond more positively to a medium self-disclosing teacher than students who are mainly interested in more content-oriented dimensions. It is possible that the MANOVA effect was not significant because subject populations varied in their interest in the personal side of classroom dynamics. This remains an empirical question; both student personality dimensions (e.g., need for affiliation and self-esteem) as well as educational orientations of students (e.g., rapport vs. knowledge acquisition) could provide clues for interpretation.

Consistency in the results appeared in subject ratings of the teacher's approachability and the behavioral intention item "would feel comfortable in approaching him outside of class." The items regarding the teacher's being open and trustworthy were also significant for the self/other comparison at the medium level of disclosure. These results (as well as those on items "would take a course" and "would recommend him to others") reinforce the belief that this condition was impacting on those students particularly interested in personal aspects of education.

Type of disclosure at high intimacy. In addition to producing a highly significant multivariate effect, this comparison revealed many (26) significant univariate effects. Completely in line with

predictions, other was rated higher than self-disclosure. Subjects evaluated the high self-disclosing teacher in a very negative manner.

Little research has been done on the rules governing appropriate self-disclosure or on the norms governing when it is acceptable to divulge personal information. Investigators in this area (e.g., Chaiken and Derlega, 1974) have assumed that disclosing intimate information about oneself at the wrong time or the wrong place may reflect maladjustment. Intuitively speaking, the classroom may simply be the wrong place for such highly intimate self-disclosure.

Both the teacher's status and the role expectations students hold for teachers indicate the inappropriateness of highly intimate self-disclosure by a teacher. Chaiken and Derlega (1974) provide support for this idea. They reported that disclosing highly intimate information to anyone but a close friend is viewed as less appropriate and less socially desirable. They also found that subjects rate self-disclosure from a person to a higher-status individual as more appropriate and less unusual than the reverse (i.e., high to low status).

A study by Derlega, Lovell and Chaikin (1976) provides indirect support for the inappropriateness of high teacher self-disclosure. They found that subjects were more positively inclined toward high disclosure on the part of a therapist when they had been told in advance that this was appropriate behavior for the therapist. Thus, perceptions of the appropriateness of disclosing behavior can influence reactions toward the discloser.

The post-experimental questionnaire in the present study clearly indicates that subjects perceived high self-disclosure to be inappropriate

for the teacher. Subjects' comments ranged from "would turn me off" to "who needs it--I have enough problems of my own." They also commented on the loss of respect they would feel for the teacher in this situation.

Chaiken and Derlega (1976) propose that high therapist self-disclosure could be counterproductive if clients did not perceive this as appropriate, thus leading to client withdrawal. Cozby (1972) suggests that a high disclosing person is reacted to negatively because, by coming too close, he/she represents a threat to privacy. Again, the post-experimental questionnaire provides support for this negative reaction. Subjects reported that high teacher self-disclosure would make them feel uncomfortable. The effect of perceived inappropriateness combined with this feeling of subject uneasiness may well be sufficient to account for the low ratings in this condition.

Because of the lack of research comparing self with other disclosure, few clues are provided as to why high-intimacy other disclosure was rated so highly. One possible explanation is that the high-other disclosure allowed students to respond to the intimacy level without the feelings of threat and uneasiness which accompanied high self-disclosure. As previously noted, a consistent finding in the self-disclosure literature is its reciprocity effect (Cozby, 1973). Perhaps the fact that the high disclosure was communicated in a less personal way provided a "safety mechanism" to allow for subject tendencies to reciprocate the level at which the teacher was operating. It would be necessary to make comparisons between self and other disclosures in different situations in order to see if this held true.

As with the medium level of intimacy, items relating to personality dimensions produced significant univariate effects. Of particular

interest is the fact that "likeability" showed a highly significant effect ($p .002$, other rated higher than self-disclosure). This is contrary to research on self-disclosure which has shown a high disclosing person to be liked to a lesser degree (Cozby, 1972). This result can be viewed as providing indirect support for the notion of other disclosure providing a safety feature for high levels of intimacy.

Unlike the medium level, many items relating to professional dimensions (e.g., "informed," "well prepared," "organized") showed significant univariate effects. It is possible that the subjects viewed the teacher as more professionally qualified. However, as so many items were significant, it appears likely that a "halo" effect was at work here. As in the Dr. Fox studies, it is possible that subjects were reacting to the general interest level of the lecture rather than its specific dimensions.

Two items ("spoke understandably" and "used a well-modulated tone of voice") unexpectedly produced significant effects, particularly at the high level of intimacy (other rated higher than self-disclosure). It appears that the two items were not as impervious to the manipulations as predicted.

In reference to the tone of voice, a study by Wilson (1968) provides indirect insight as to a possible explanation. He reported that perceptions of height of a stimulus person increased as his ascribed academic status increased (from student to professor). This indicates that a dimension as objective (at some level) as height can be distorted by altering perceptions of status. As mentioned, high self-disclosing behavior is viewed as inappropriate from a high to low

status person. Perhaps the other disclosing lecturer was able to maintain more of his authoritative air and status than the self-disclosing teacher as he was not revealing himself. The self-disclosing teacher may not only have been perceived as a norm-breaker in reference to appropriateness, but also as decreasing perceptions of his status as a teacher. An interesting pursuit would be a study of other dimensions (e.g., height) which could be distorted by the manipulations.

Elmore and LaPointe (1975) found that male teachers were rated higher on "spoke understandably" than were female teachers. Although this gives no clue as to why the self/other manipulation impacted on this dimension, it does indicate that perceptions on this item can be altered. Further research is needed here.

It is of interest to examine several items which did not show a difference on this comparison, i.e., subject's perceptions at the same level across the self/other factor. "Open" showed no difference; both conditions were rated high on this item. Perhaps once this point of intimacy is reached, a person appears so open that discrimination about type is not being made.

"Relaxed", "informal", and "appears comfortable" showed no differences between other and self-disclosure. This is important, as it would be unfortunate if the teacher appeared more nervous and less comfortable in the self-disclosing condition (which could be quite possible).

Cautions for Interpretation

There are several factors which point out the necessity in exercising caution in interpreting this study. First, there was only one teacher in the experiment. The unique impact this teacher had on

subjects' perceptions are confounded with the impact of the experimental manipulations. However, this type of design is used frequently in educational research (e.g., Ware and Williams, 1975; Woolfolk and Woolfolk, 1975).

It should also be noted that the microteaching paradigm used in this study was chosen to provide an optimum combination of control and correspondence to a classroom experience. Thus, it was not assumed that the 25+ minute sample of behavior surveyed represented a typical cross-section of classroom activity, but rather the closest approximation which would allow for the experimental manipulation of the variables of interest. Ultimately, any hypotheses developed by this form of research must be tested through an examination of teacher-student interactions in regular classroom settings.

A third caution pertains to the fact that sessions, not students, were randomly assigned to treatments. It is possible that systematic session-to-session student differences may result when students select sessions themselves, as did the majority of subjects in this study. This reaffirms the need for studying student characteristics in reference to the impact of teacher disclosing behavior. The random assignment of treatments, however, make such student differences unlikely, especially when compared to the risk of class-to-class differences in typical field studies of student evaluations.

Implications for Future Research

The present study supports the research by Haslett (1976) which demonstrated the importance of a personalization factor that a teacher adds to his/her class. It is also congruent with studies on the personality characteristics of teachers (e.g., Sherman and Blackburn,

1975) which indicate the potent impact of different traits. It seems clear that teacher personality characteristics in general and teacher self-disclosure in particular can exert great influence on students' perceptions of instructor effectiveness.

Further study on particular personality traits is needed. It is recommended that more research be performed in an experimental setting. Within the field of personality, there is great controversy over the validity and meaningfulness of personality tests. The inconsistent results in investigations of teacher personality may be a function of the problems inherent in the instruments used. Experimental manipulation of teacher traits (insofar as possible) is one approach to circumvent this problem.

It is obvious that teacher disclosure needs to be investigated in the context of a longer relationship, i.e., over the course of a semester. All research on self-disclosure suffers from the lack of long-term investigation. The ideal situation would be to have one teacher modify his/her behavior in line with experimental manipulations in two separate sections of the same course. This may be asking the impossible.

The impact of teacher disclosure on student achievement is as yet unexplored. A study by Kaplan and Pascoe (1977) demonstrated that retention of concept material was improved when humorous examples were used to illustrate the concepts. It is possible that self-disclosure may function in a similar manner.

The need for investigation of student characteristics has already been emphasized. There might exist some interesting learner characteristics by instructional treatment interactions.

The variables of both student sex and teacher sex need further investigation. Although the present study showed no significant effects of student sex, it is possible such differences exist with a female teacher.

A most obvious line of future research pertains to the course content in which disclosure occurs. Subject reports indicated their belief that teacher self-disclosure is appropriate in certain courses (e.g., psychology and communication) but unnecessary in others (e.g., math and science). It would seem that course content could serve to limit the possibilities about which a teacher could disclose; imposing self-disclosure in this case could appear artificial and lacking genuineness, thus defeating its purpose.

The implications of this type of research for teacher training are great. More attention to the development of a teacher's personal qualities seems needed. It is important to allow and encourage the addition of a teacher's uniqueness to his/her style while teaching organizational skills, presentation manner, etc. The affective dimensions of a teacher can be just as potent as the cognitive.

A Final Note

It is impossible to avoid inserting a "unique aspect" into a study on self-disclosure (after all, there is not one "I" anywhere!). Included, therefore, is a quote taken from one subject's post-experimental questionnaire. On the items asking for any additional comments, he wrote, "I think this is a very interesting subject and I hope you don't 'forget about it' after you get your Ph.D." I have taken this comment to heart (and I used that word!).

APPENDIX A
Basic Lecture

Psychotherapy can be seen either as a transparently simple phenomenon that everyone intuitively understands and has practiced, or as a confused, incredibly complex process well beyond the reach of current scientific understanding. If we define psychotherapy commonsensically as a collective term for events that have a demonstrably positive effect on our state of mind, psychotherapy is easily understood by everyone. In this sense of the term, that is the basic notion of some sort of beneficial effect on our state of mind, the variety of events which could be considered therapeutic is endless.

We can categorize the infinite number of events that can be considered to have a therapeutic effect in order to be able to relate them to our own everyday experiences. First of all, let's start at the physiological level. There are a large number of physiological changes which we can induce ourselves in order to make ourselves feel pleasant, or, at least, less unpleasant. Examples of these changes range from those that satisfy basic needs (such as food, sex, rest) to drugs that produce a wide range of discernible effects on your consciousness (such as depressants and psychedelics).¹

Second of all, there is an even larger number of events that alter our state of well-being at the psychological level. These events can include achievements, avoidance of failure, exercising your skills and abilities, going out for entertainment. Anything that in some way makes you feel better at the psychological level.²

Note: The eleven notations in the basic lecture indicate at what points each of the corresponding manipulations was included.

Third of all, there are the events at the interpersonal or social group level. This would include enhancement of your social recognition, increased degree of acceptability or belongingness in a group that you value, or enhanced control over the range and type of your social participation.³

Given this wide range of experiences that are potentially beneficial or therapeutic for ourselves in some way, we can then view all human behavior as being concerned in one way or another with manipulating the self or the environment to provide psychotherapy when it is needed, and, practically speaking, this is rather frequently. Think about all the times, even within a single day, that you yourself engage in activities at each of these three levels with the purpose of simply feeling better. At the same time it should be obvious that these three levels do not function separately, in isolation from each other. Instead, there is a significant degree of interaction between all three systems that I've just described. Take one example of a common discomfort that we all feel from time to time, such as diffuse tension and vague uneasiness. You might feel this uneasiness because it was stemming from physical fatigue, that is the physiological level, or from some sort of personal problem (the psychological level) or maybe from unfavorable or disappointing behavior of others (the social level). When this tension or uneasiness originates in one of these three levels, it is apparent that the difficulty may be reflected at the other two levels.⁴ So you are not, at any one time, functioning solely at one level to make yourself feel better because of a problem in one particular sphere. Instead, your state of well-being is more a result of these three systems working in conjunction.

Self-treatment for such minor problems could take various forms. Treatment along the physiological dimension might consist of a sedative and a rest; psychological treatment might involve engaging in some satisfying diversion, such as a hobby; or seeking out people who are usually friendly and reassuring to be around can be helpful.⁵

Such self-treatment for minor problems may temporarily ease distress, but most recurrent, unpleasant circumstances that create tension and anxiety can neither be avoided nor rationally resolved. A mild therapy such as those I've mentioned is all you can really prescribe for yourself. You are, in effect, saying to yourself, "I think I know what's bothering me, and I've done as much as I can to resolve it. That's all right, but there's a residual carryover of tension I can dissolve by being especially nice to myself."

However, when we go beyond the normal mental distress of everyday life, beyond the vague discomfort and tension we might feel, to consider severe anxiety and tension, self-treatment may be ineffective and possibly even harmful. Not only can it be harmful in obvious ways, such as taking too many drugs at one time, but it is important to realize that your capacity for accurate self-scrutiny is reduced when your level of anxiety and tension increases. Concurrently your accuracy in reading the behavior of others is also reduced.⁶ In other words, the more anxious you are, the less able you are to perceive clearly yourself and your environment without adding some distortion to what's happening to you. This minimizes your ability to provide constructive changes for yourself.

Thus there comes a point at which psychotherapy, to be effective, may have to be turned over to someone other than yourself, the suffering

individual. We've already discussed self-treatment at the social level where you would go and talk with a friend about your problems. An important question to ask here, then, is what is the difference of the role between a psychotherapist and a friend? Your next-door neighbor might say the same words of comfort as would a clinical psychologist, but should we regard this conversation with a friend as psychotherapy? A crucial difference to note here is that in therapy a client is not condemned for revealing negative aspects of him or her self. The therapist accepts the client as a person, appears to understand him or her, and is still interested in working with them despite these negative aspects. As a consequence of this suspension of judgment on the part of the therapist, the client is provided an opportunity for discussing and exploring many things that he or she might not feel free to discuss with a friend.⁷ There are situations where a person may have performed certain acts which he or she feels that friends would not condone. At the same time, they may feel a need to talk about these events. The therapeutic situation would allow them to bring these events out in the open and to appraise these disturbing aspects of themselves.⁸ As the client feels more secure in therapy, he or she is able to bring forth and evaluate many more facets of their personality including the difficulties they are experiencing. With varying degrees of activity, the therapist helps the client face these important feelings to get in touch with them in order to be able to assimilate and integrate these aspects of themselves.⁹ Acceptance of such aspects can enable the client to explore the personal significance of these events. In this sense, therapy is also a learning or growth experience. Clients may be able to modify their perception of themselves and also their perception

of others. The more I am able to accept various aspects of myself, such as ()¹⁰ and ()¹¹, the more I could accept these in others.

Psychotherapy may be viewed in both a positive and a negative sense: negative in that it is a means to relieve suffering based on an emotional disorder. However, I want to stress that it can also be seen in a positive way: as a specialized human relationship designed to help people live their lives more fully. Most therapists feel that greater insight into ourselves will yield greater control over our behavior and subsequent improvement in it. Therefore therapy aims to help people discover the reasons they behave as they do. Therapy can also enable us to maximize the inherent potential that we all possess. Coming to grips with your inner strengths, clarifying your own values, and trusting yourself more fully can surely be seen as admirable goals of the therapeutic endeavor.

APPENDIX B
Manipulations

LOW

1. When I am feeling a little tension, it is very beneficial for me to go ice skating, to really get my muscles moving, for skating is my most enjoyable form of physical activity.
2. I feel a lift in my self-concept when I reach a goal that I have set for myself. When I do well on an exam in psychology, which is my favorite subject, the sense of achievement I experience is beneficial to my state of mind.
3. This social dimension can be of utmost importance to us. My favorite place to work is in an academic environment, where I am able to have a lot of contact with other people. This high level of social participation enables me to receive feedback on how others see me as a person.
4. I sometimes worry about getting old because I don't want to be "over the hill". During the times that I worry about this, the quality of my interaction with others goes down. It is virtually impossible for me to feel discomfort or uneasiness in one system, e.g., psychological, without noticing uneasiness in another system, e.g., social.
5. For me, listening to some of my favorite music, like Fleetwood Mac and The Eagles never fails to be satisfying for me.
6. The more tense and anxious I become, the more difficult it is for me to know how well I am performing in the different aspects of my daily work, such as writing lectures, grading exams, and committee meetings.

7. For example, I told a friend that I was strongly opposed to someone marrying for money, but I would not feel comfortable explaining the reasons behind that opinion. I would, however, discuss those feelings with a therapist, as I would feel safer and less threatened.
8. such as my own fears about getting old because I think I'll lose my usefulness.
9. The more secure I could feel in the therapeutic situation, the more thoroughly I would be able to explore, for example, my feelings about my career and its role in my entire life. I enjoy being with lots of people so I want to work in a place that allows me to have lots of contact with others. Yet, at the same time, I detest living in a crowded environment. This makes it necessary for me to order my priorities in reference to my personal and professional goals and work out these conflicts.
10. getting old
11. the importance of my career, the more I could accept such fears and values in others.

MEDIUM

1. When I am feeling a little tension, it is very beneficial for me to drink a couple glasses of wine, for one of my positive personal characteristics is to make myself feel lighter and happier
2. I feel a lift in my self-concept when I reach a goal that I have set for myself. When I made a most crucial decision in my life, such as

choosing to go to graduate school rather than take a job that was offered to me, the sense of achievement I experienced was beneficial to my state of mind.

3. This social dimension can be of utmost importance to us. I go on dates fairly frequently, usually several times a week. This high level of social participation enables me to receive good feedback on how others see me as a person.
4. I sometimes worry about my habit of interrupting others while they are speaking, which is undoubtedly one of my most bothersome habits. During the times that I worry about this, the quality of my interaction with others goes down. It is virtually impossible for me to feel discomfort or uneasiness in one system, e.g., psychological, without noticing uneasiness in another system, e.g., social.
5. For example, I have been involved in a men's group to receive the encouragement to face my more sensitive, rather than competitive, side.
6. The more tense and anxious I become, the more difficult it is for me to be able to evaluate clearly the aspects of my personality that I worry about; such as my tendency to set impossible goals for myself that almost doom me to failure.
7. For example, I told a friend that one of the things I am most afraid of is being a failure, but I would not feel comfortable explaining the reasons behind that statement. I would, however, discuss those feelings with a therapist, as I would feel safer and less threatened.

8. my dissatisfaction with women, e.g., when they seem to change their feelings toward me.
9. The more secure I felt in the therapeutic situation, the more thoroughly I would be able to explore, for example, my true feelings about the people that I work with. As I've mentioned, I'm very much a people-oriented person, so I basically enjoy all the people that I work with. There are times, however, that I get irritated with the smallest things they do and find myself wanting to get away from them despite the fact that I usually enjoy being with them.
10. the fact that I feel anxious and upset when people criticize or praise me
11. my ability to talk easily with others.

HIGH

1. When I am feeling a little tension, it is very beneficial for me to have sex with a woman, which I like to do with fairly high frequency, say at least four times a week.
2. I feel a lift in my self-concept when I reach a goal that I have set for myself. When I decided to tell my parents about some of my guiltiest secrets, such as when I was arrested for stealing, the sense of achievement I experienced after telling them was beneficial to my state of mind.
3. This social dimension can be of utmost importance to us. When I frequently date women that are blond and intellectual, that is the

kind of person that I would most like to have sexual experiences with, I thrive on feeling accepted. This high level of social participation enables me to receive good feedback on how others see me as a person.

4. I sometimes worry about the times I would lie to my best friend, which is one of the things in my past life about which I am most ashamed. During these times that I worry about this, the quality of my interaction with others goes down. It is virtually impossible for me to feel discomsort or uneasiness in one system, e.g., psychological, without noticing uneasiness in another system, e.g., social.
5. For example, I like to take long baths to reflect on my activities, but I don't like anyone to see me do this.
6. The more tense and anxious I become the more difficult it is for me to be able to clearly evaluate myself, such as my insecurity about my sexual adequacy.
7. For example, I told a friend that I did have doubts about my sexual adequacy, but I would not feel comfortable explaining the reasons behind that statement. I would, however, discuss those feelings with a therapist, as I would feel safer and less threatened.
8. my sexual fantasies, such as wanting to have numerous affairs.
9. The more secure I felt in the therapeutic situation, the more thoroughly I would be able to explore, for example, my feelings about the times I lied to the woman I'm going out with.
10. doing things I later regret, such as manipulating people for my own gain

11. my ability to generate pleasant fantasies, such as having sexual experiences with nameless lovers.

APPENDIX C

Dependent Measures

Instructions: These questions are to test you on the material in the lecture.

Please answer the following questions based on what you just heard in the lecture.

- True False 1. Psychotherapy refers to a specific series of events which affect our state of mind.
- True False 2. Individuals often unintentionally provide themselves with therapeutic situations.
3. According to the lecturer, therapeutic events may take place on three levels. They are:
- 1.
 - 2.
 - 3.
- True False 4. Most people find it difficult to operate on more than one of the above levels at one time.
- True False 5. Chronic anxiety-producing situations can often be resolved by self-treatment if the person will only recognize the problem.
6. What is the major difference between discussing a problem with a friend and with a therapist according to the lecturer?
- True False 7. Although people undergoing psychotherapy might change their attitudes toward themselves, it is unreasonable to expect that they may come to see others differently.
- True False 8. Advocates of psychotherapy claim that undergoing such treatment will increase a person's ability to control their behavior.
- True False 9. Therapists, for the most part, believe that it is advantageous to determine the reasons behind our behavior if that behavior is unpleasant.

Instructions: For the following items we ask you to indicate your impression of the teacher. These items are opposite adjectives that might be used to describe how you perceived the teacher. Indicate how you perceived the teacher along each continuum by placing a check mark (✓) in the appropriate box. Read each scale carefully.

1.

warm	neutral	cold
------	---------	------
2.

not understanding	neutral	understanding
----------------------	---------	---------------
3.

likeable	neutral	unlikeable
----------	---------	------------
4.

not genuine	neutral	genuine
----------------	---------	---------
5.

accepting	neutral	rejecting
-----------	---------	-----------
6.

uncaring	neutral	caring
----------	---------	--------
7.

pleasant	neutral	unpleasant
----------	---------	------------
8.

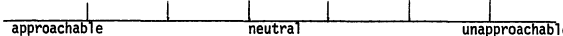
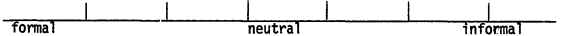




defensive	neutral	open
-----------	---------	------
9.

friendly	neutral	unfriendly
----------	---------	------------
10.

nervous	neutral	relaxed
---------	---------	---------
11.

trustworthy	neutral	untrustworthy
-------------	---------	---------------
12.

insensitive	neutral	sensitive
-------------	---------	-----------

13.  approachable neutral unapproachable
14.  formal neutral informal
15.  experienced neutral inexperienced
16.  ignorant neutral knowledgeable
17.  informed neutral uninformed
18.  inarticulate neutral articulate

Instructions: The following items reflect some of the ways teachers can be described. For the teacher you just saw, please circle the number which indicates the degree to which you feel each item is descriptive of him: (5) if it is very descriptive; (1) if it is not at all descriptive; or (4), (3), or (2) if it falls between these poles.

Very	Not at
descrip-	all des-
tive	criptive

- | | | | | | |
|---|---|---|---|---|---|
| 5 | 4 | 3 | 2 | 1 | 1. Stimulated interest in the subject. |
| 5 | 4 | 3 | 2 | 1 | 2. Presented the material in an interesting way. |
| 5 | 4 | 3 | 2 | 1 | 3. Explains clearly |
| 5 | 4 | 3 | 2 | 1 | 4. Is well prepared |
| 5 | 4 | 3 | 2 | 1 | 5. Presented material in a well-organized manner. |
| 5 | 4 | 3 | 2 | 1 | 6. Communicates knowledge effectively. |
| 5 | 4 | 3 | 2 | 1 | 7. Makes good use of examples and illustrations. |
| 5 | 4 | 3 | 2 | 1 | 8. Is enthusiastic |
| 5 | 4 | 3 | 2 | 1 | 9. Knew his subject matter. |
| 5 | 4 | 3 | 2 | 1 | 10. Appears comfortable in class. |
| 5 | 4 | 3 | 2 | 1 | 11. Personalizes material |
| 5 | 4 | 3 | 2 | 1 | 12. Spoke understandably |
| 5 | 4 | 3 | 2 | 1 | 13. Used a well-modulated tone of voice. |

How does this instructor compare with other teachers you have had?

Among the
very best

5

4

About
average

3

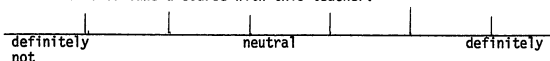
2

Among the
very worst

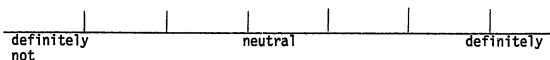
1

Instructions: We would like to know how you might respond to future interactions with this teacher. Place a check mark (✓) in the box that corresponds to how likely or unlikely you think you would be to follow the course of action described in each item.

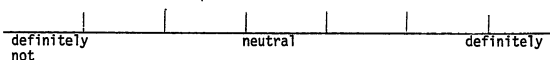
1. I would want to take a course with this teacher.



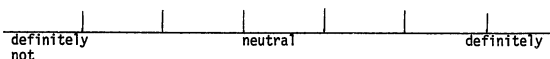
2. I would recommend this teacher to others.



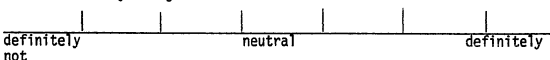
3. I would feel free to ask questions in a class with this teacher.



4. I would feel comfortable in approaching this teacher outside of class to discuss the course.



5. I would share my thoughts with this teacher.



APPENDIX D

Summaries of Univariate Tests

Summary of results of univariate tests on type of disclosure

Variable	F _{1,90}	p-level
Warm	0.123	.727
Understand	0.372	.543
Likeable	1.597	.210
Genuine	0.774	.381
Accepting	0.216	.643
Caring	0.224	.637
Pleasant	7.449	.008
Open	10.322	.002
Friendly	0.142	.707
Relaxed	3.003	.087
Trustworthy	0.077	.781
Sensitive	2.766	.100
Approachable	0.722	.398
Informal	0.252	.617
Experienced	5.461	.022
Knowledgeable	0.044	.835
Informed	0.324	.571
Articulate	1.302	.257
Stimulate	0.458	.500
Presented	3.628	.060
Clear	9.333	.003
Prepared	2.268	.136
Organized	6.478	.013
Communicated	6.185	.015
Examples	4.079	.046
Enthusiastic	0.580	.448
Knew	0.005	.943
Comfortable	2.832	.096

Variable	F _{1,90}	p-level
Personalized	26.186	.001
Spoke	4.232	.043
Voice	4.047	.047
Compare	0.058	.809
Take	0.899	.346
Recommend	0.201	.655
Ask	0.219	.641
Approach	0.029	.865
Share	0.041	.841

Summary of results of univariate tests on level of disclosure

Variable	F _{2,90}	p-level
Warm	0.434	.649
Understand	0.584	.560
Likeable	0.459	.633
Genuine	0.223	.800
Accepting	0.051	.950
Caring	0.676	.511
Pleasant	8.093	.001
Open	1.470	.235
Friendly	0.631	.534
Relaxed	0.714	.493
Trustworthy	1.909	.154
Sensitive	1.605	.207
Approachable	0.803	.451
Informal	3.605	.031
Experienced	0.769	.466
Knowledgeable	3.103	.050
Informed	1.347	.265
Articulate	1.052	.354
Stimulate	5.414	.006
Present	4.994	.009
Clear	6.551	.002
Prepared	7.058	.001
Organized	8.925	.001
Communicated	6.699	.002
Examples	4.621	.012
Enthusiastic	2.848	.063
Knew	2.291	.107
Comfortable	0.871	.422
Personalized	2.788	.067
Spoke	2.151	.122

Variable	$F_{2,90}$	p-level
Voice	2.488	.089
Compare	5.519	.005
Take	7.183	.001
Recommend	3.675	.029
Ask	0.615	.543
Approach	0.448	.640
Share	0.986	.377

Summary of results of univariate tests on interaction

Variable	F _{2,90}	p-level
Warm	6.941	.002
Understand	4.908	.009
Likeable	6.552	.002
Genuine	2.849	.063
Accepting	3.062	.052
Caring	2.871	.062
Pleasant	13.043	.001
Open	4.745	.011
Friendly	2.448	.092
Relaxed	1.069	.348
Trustworthy	5.178	.007
Sensitive	5.424	.006
Approachable	3.899	.024
Informal	2.736	.070
Experienced	1.150	.321
Knowledgeable	3.302	.041
Informed	3.807	.026
Articulate	2.297	.106
Stimulate	6.175	.003
Present	7.190	.001
Clear	3.694	.029
Prepared	1.296	.279
Organized	1.471	.235
Communicated	10.188	.001
Examples	1.700	.189
Enthusiastic	5.157	.008
Knew	3.543	.033
Comfortable	1.447	.241
Personalized	0.635	.532
Spoke	2.667	.075

Variable	F _{2,90}	p-level
Voice	1.608	.206
Compare	10.776	.001
Take	9.698	.001
Recommend	10.430	.001
Ask	4.680	.012
Approach	6.181	.003
Share	3.208	.045

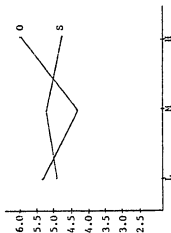
APPENDIX E

Summary of results of ratings by subjects in the control group

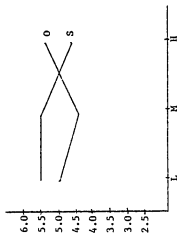
Variable	Group mean (N=24)
Warm	4.46
Understanding	4.25
Likeable	5.33
Genuine	4.13
Accepting	4.67
Caring	3.79
Pleasant	5.29
Open	4.83
Friendly	5.13
Relaxed	3.54
Trustworthy	4.38
Sensitive	4.13
Approachable	4.79
Informal	4.25
Experienced	3.92
Knowledgeable	5.58
Informed	5.67
Articulate	4.54
Stimulated interest	2.25
Presented in interesting manner	2.04
Explains clearly	2.75
Is well prepared	4.00
Presented in organized way	3.88
Communicated effectively	2.58
Made good use of examples	3.08
Is enthusiastic	2.50
Knew subject	4.17
Appears comfortable	3.13

Variable	Group mean
Personalizes material	2.00
Spoke understandably	2.75
Used well-modulated voice	3.04
How does he compare	2.42
Would take a course with him	3.46
Would recommend him	3.42
Would ask questions	4.88
Would approach him	5.21
Would share thoughts	4.25

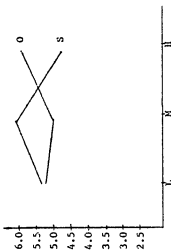
2. UNDERSTANDING



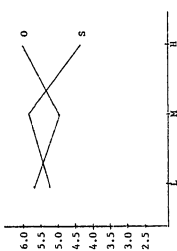
4. GENUINE



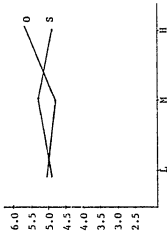
1. WARR



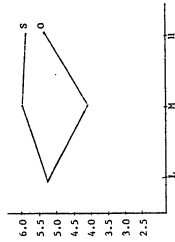
3. LIKABLE



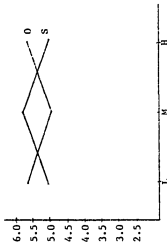
6. CARING



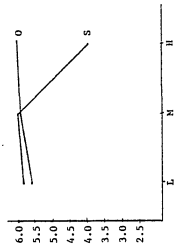
8. OPEN



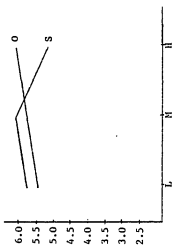
5. ACCEPTING



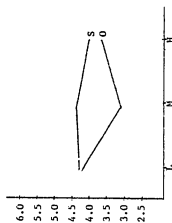
7. PLEASANT



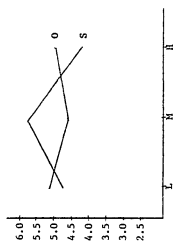
9. FRIENDLY



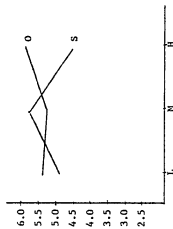
10. RELATED



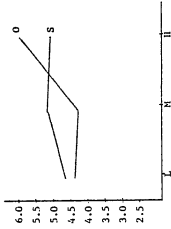
11. TRUSTWORTHY



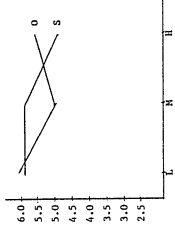
12. SENSITIVE



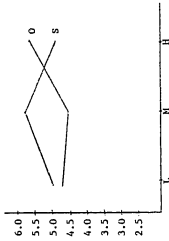
14. INFORMAL



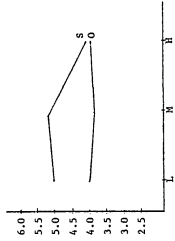
16. KNOWLEDGEABLE



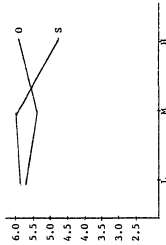
13. APPROACHABLE



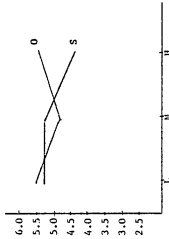
15. EXPERIENCED



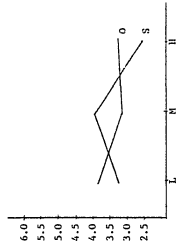
17. INFORMED



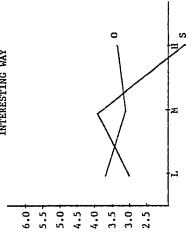
18. ARTICULATE



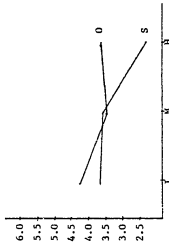
19. STIMULATED INTEREST



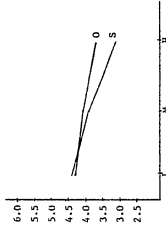
20. PRESENTED MATERIAL IN INTERESTING WAY



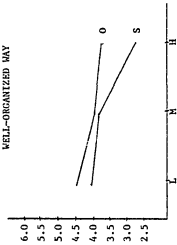
21. EXPLAINS CLEARLY



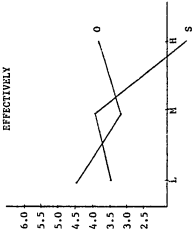
22. IS WELL PREPARED



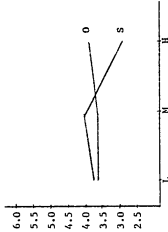
23. PRESENTED MATERIAL IN WELL-ORGANIZED WAY



24. COMMUNICATES KNOWLEDGE EFFECTIVELY



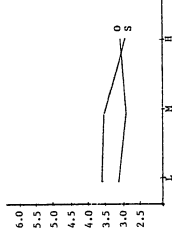
26. IS ENTHUSIASTIC



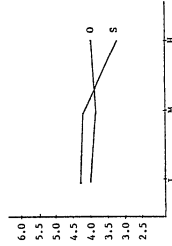
25. MAKES GOOD USE OF EXAMPLES



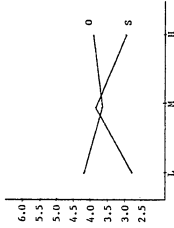
28. APPEARS COMFORTABLE



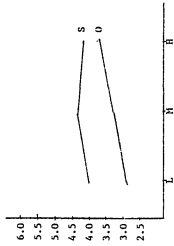
27. KNOW SUBJECT MATTER



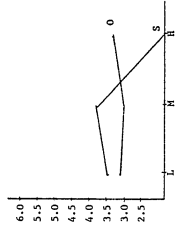
30. SPO. & UNDERSTANDABLY



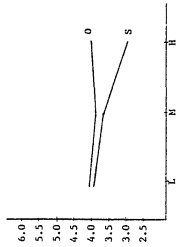
29. PERSONALIZES MATERIAL



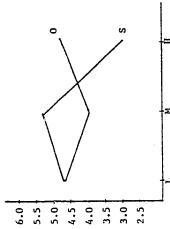
32. HOW DOES IIE COMPARE?



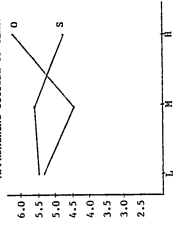
31. VOICE



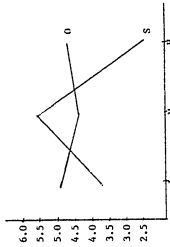
34. RECOMMEND HIM TO OTHERS



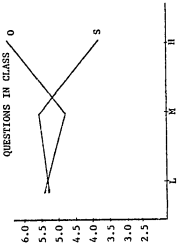
36. WOULD FEEL COMFORTABLE IN APPROACHING OUTSIDE OF CLASS



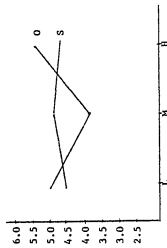
33. WOULD TAKE A COURSE WITH HIM



35. WOULD FEEL FREE TO ASK QUESTIONS IN CLASS



37. I WOULD SHARE MY THOUGHTS
WITH HIM



APPENDIX G

Summary of results of quiz scores

Analysis of Variance

Source of Variation	SS	DF	MS	F	p-level
Level of disclosure	11.38	2	5.69	2.58	.08
Type of disclosure	4.90	1	4.90	2.23	.14
Interaction	14.56	2	7.28	3.30	.04
Residual	198.41	90	2.21		

Group Means

Type	Level		
	Low	Medium	High
Self	6.11	6.83	5.53
Other	5.93	6.87	6.93

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